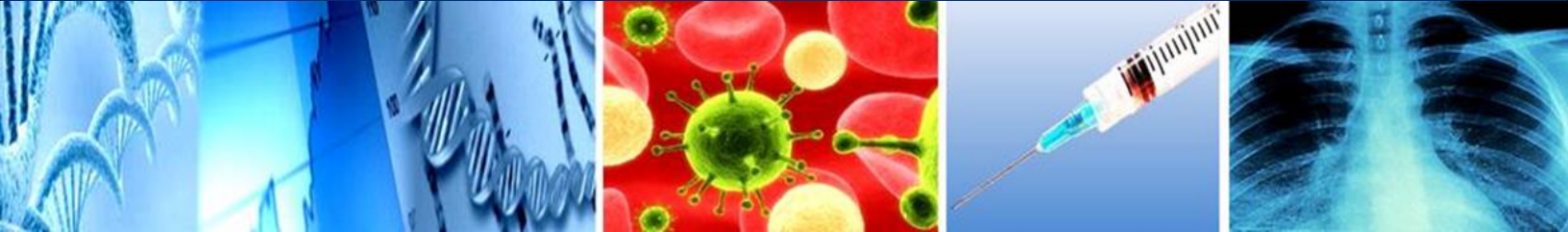




**Department of Public Health
Communicable Disease Section**



2014 Annual Morbidity Report

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ACKNOWLEDGEMENTS

This report was prepared by Stacey Davis, MPH and Kim Woods, MPH of the Communicable Disease Section (CDS). Others contributing to this report include: Maxwell Ohikhuare, MD, Health Officer; Susan Strong, NP, MSN, CDS Program Manager; Lea Morgan, MPH, CDS Program Coordinator; and other members of CDS including Carmen Arias, Margie Castaneda, Maria Cota, Roger Gonzalez, Pilar Guillén, Diane Hardy, Jenny Hernandez, RN, Maricela Hernandez, Marie Jean-Baptiste, Tanya Martinez, Mayra Parga, Jennifer Rosales, Celia Saucedo, Terri Serna, Olu Teiko, Cara Tordesillas, Beverly Villa, Vicki Williams.

This report presents a summary of communicable diseases reported in the County of San Bernardino in 2014. The contents are divided into two sections:

Section 1 – Summary of Reported Communicable Diseases

- Reported Communicable Diseases by Age Group
- Reported Communicable Diseases by Race/Ethnicity

Section 2 – Incidence Rates for Selected Diseases by Primary Mode of Transmission

- Diseases Transmitted by Blood or Blood Products
- Diseases Transmitted by Fecal-Oral Route
- Diseases Transmitted by Sexual Contact
- Diseases Transmitted by Respiratory Secretions
- Diseases Associated with Environmental Factors
- Diseases Transmitted by Mammalian Vectors
- Diseases Transmitted by Arthropod Vectors

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Comments regarding the report are welcome and may be addressed to:

County of San Bernardino Department of Public Health
Communicable Disease Section
351 N Mt View, Room 104
San Bernardino, CA 92415-0010
(800) 722-4794

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INTRODUCTION

"In public health, we can't do anything without surveillance. That's where public health begins."

David Satcher, MD, PhD, U.S. Surgeon General, 1998-2002

Public health surveillance is the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice.

The Communicable Disease Section of the County of San Bernardino Department of Public Health has the responsibility for the collecting, monitoring and control of communicable disease information. State law requires medical providers, hospitals, and laboratories to report selected diseases and conditions to the local health department. The local health department is then required to investigate the extent of these illnesses, report to the California Department of Public Health the number of said diseases, and apply control measures when necessary. As part of the investigation process, interviews of the affected persons and, in some instances, family members, friends and associates are conducted. The County of San Bernardino Department of Public Health uses a confidential database to track reportable diseases and conditions, record investigations and report to the California Department of Public Health.

Surveillance with analysis and interpretation helps identify demographic groups at higher risk of illness, disease trends and disease outbreaks shaping public health interventions. We hope that you find this data useful.

Thank you for your interest,



Susan Strong, NP, M.S.N

Communicable Disease Program Manager

Why Reporting of Communicable Disease is Important

The County of San Bernardino Department of Public Health is charged by California Code of Regulations (CCR) Title 17 with protection of the health of the County's visitors and more than 2.0 million residents. To fulfill this responsibility, the Department carries out a broad and comprehensive public health program which includes public health services mandated by the State of California, a substantial range of personal health services requested by the people and chosen as priority matters by the County of San Bernardino Board of Supervisors.

Physicians and other healthcare providers, personnel in laboratories, schools, daycare centers and other residential facilities are obligated by law to report certain communicable diseases to the local department of public health. Monitoring reports of communicable disease in a community allows the department of public health to fulfill its mandate of protecting the health of its residents. With timely morbidity reports, the department of public health can evaluate the impact of a given disease and make appropriate recommendations to limit its further spread.

Delay or failure to report communicable diseases has contributed to serious outbreaks in the past. Failure to report can result in increased disease in the community, time lost from work or school, increased costs for diagnosis and treatment, hospitalization, and possibly death.

When reporting does occur, removing persons from sensitive occupations, (e.g. food handlers) prevents the spread of diseases such as salmonellosis and hepatitis A. The early detection and appropriate treatment of patients with tuberculosis, the identification of asymptomatic carriers of typhoid, the immunization of persons exposed to vaccine-preventable diseases and alerting healthcare providers about prevalent infections are just a few of the benefits derived by the entire community when reporting is timely and accurate.

Purpose of the Communicable Disease Report

The County of San Bernardino Department of Public Health summary of communicable disease promotes the wellness element of the Countywide Vision by describing the health and safety of the county's residents and visitors. For more information about the Countywide Vision, Job Statement and Paradigm, visit www.sbcounty.gov. This report describes the extent and burden of various reported illnesses for the residents in this County. Where the impact of a certain disease in a particular group of individuals appears high, this information can be used to redirect disease control efforts. The report helps evaluate the effectiveness of the County's disease prevention and control programs by comparing County of San Bernardino rates with those of California and the U.S. It represents an evolving effort by several disease control programs in the County. As the communicable disease concerns of our residents change, the data collected and summarized in this report will also change.

DATA LIMITATIONS

The obligation for health care professionals to report designated diseases and conditions to their local department of public health is mandated by Title 17, Sections 2500, 2504 and 2505 of the California Code of Regulations. The data presented in this report were tabulated from disease reports received from laboratories, hospitals, physicians, schools and other healthcare providers throughout the county. The cases were reported through a passive surveillance system. For this reason, two major limitations must be acknowledged when interpreting these data.

The first major limitation is the underrepresentation of the true burden of disease. It is clear that not every reportable disease or condition is actually identified by or reported to the Department of Public Health. Individuals may not be ill enough to require medical care or the healthcare provider may not request testing of the patient at the time of the office visit. Diseases and conditions reportable only by healthcare providers (see Appendix C) are significantly underreported. Illnesses that are fatal, require prophylaxis for prevention, or those that are reportable by both laboratories and physicians are more likely to be reported.

Additionally, public health data may not reflect county residents' true risk of exposure to a particular pathogen. Individuals identified as having a notifiable condition are reported by place of residence, not by place of exposure. Immigrants and other individuals who travel both domestically and abroad may acquire an unusual illness or other condition at the location of travel. These individuals are nevertheless counted in the County of San Bernardino morbidity data if their address of residence is within the County at the time of their illness. Conversely, residents who visit the County of San Bernardino may acquire an infection here and subsequently be reported by the health jurisdiction in which they permanently reside.

Finally, one other important note regarding changes in our communicable disease data: prior to June of 2011, disease morbidity was calculated based on the date the case investigation was closed and reported to the California Department of Public Health. Beginning in June 2011, cases were counted by an "Episode Date." This date is calculated as the earliest of the following dates (if the dates exist): Date Received, Date of Diagnosis, Date of Onset, Specimen Collection Date, or Date Created. This change in methodology may only affect comparison of previous years' data in diseases where seasonality is relevant.

HOW TO INTERPRET THIS REPORT

This report contains epidemiological descriptions of reportable diseases as well as a ten-year incidence rate analysis of the disease stratified by race/ethnicity and age. The features of the disease pages are described below.

Although many communicable diseases may be transmitted by more than one mechanism, in this report they are categorized by **primary** mode of transmission.

County of San Bernardino Reported Communicable Diseases 2014

Diseases Transmitted by Sexual Contact

PRIMARY/SECONDARY SYPHILIS

Infectious Agent: *Treponema pallidum*

Mode of Transmission: Contact with syphilis chancre on the genitalia, anus, or mouth, or during pregnancy or birth

Incubation Period: 21 days (range: 10-90 days)

Symptoms: Chancre, rash including palms and soles of feet, fever, swollen lymph glands, sore throat, hair loss, muscle aches and fatigue

Each selected disease is accompanied by a commentary section that includes general disease facts and local epidemiological insight.

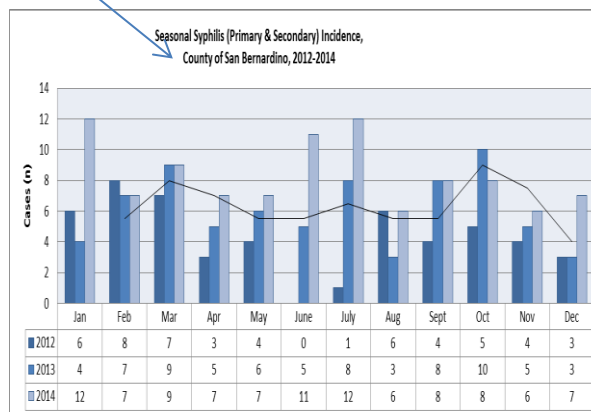
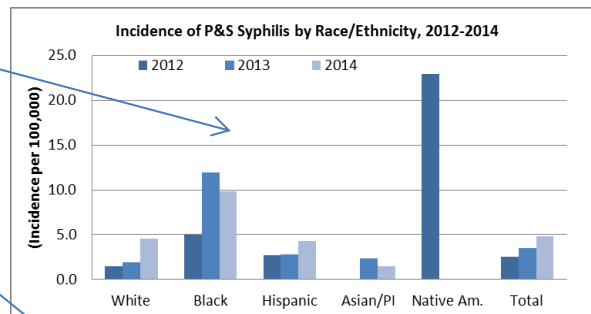
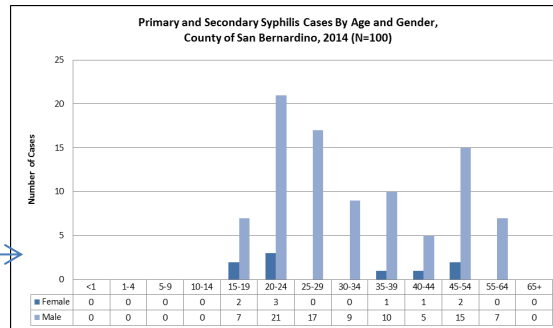
<http://www.sbcounty.gov/health/default.htm>

Primary and secondary (PS) stage of syphilis, an infectious stage, increased from 2009-2014.

- In 2013, 17,535 cases of PS syphilis were reported in the U.S., an increase of over 10.9% from 2012.
- In San Bernardino County, 90% of cases are males and almost half of the cases are in the 20-29 year age group.
- In 2014 among county cases, African Americans had rates two times that of Hispanics and Whites.
- In CA African American and Hispanic cases tended to be younger while Whites tended to be older.
- In 2013 in CA MSM account for 83% of cases among men. The rate of syphilis among MSM has been estimated to be 393.7/100,000, 170 times that of heterosexual men and 350 times that of females.
- Of CA cases, 45% of cases among MSM self-reported as HIV positive at the time of their syphilis diagnosis.
- The increase in syphilis among MSM is due to use of the internet to meet partners, having large numbers of anonymous partners and methamphetamine use.
- The presence of a syphilis chancre increases the risk of acquiring HIV by 2-5 times if exposed. As the chancre may be hidden in the vagina, rectum or mouth, serology may be the only way to detect infection.

Prevention

- Condoms if used correctly and consistently may prevent infection.
- Pregnant women should be screened at their first prenatal visit or more often if at increased risk.
- High risk individuals (HIV-infected, MSM, those with multiple sex partners) should be screened annually or as often as every 3-6 months for both syphilis and HIV if negative.



HOW TO INTERPRET THIS REPORT (CONTINUED)

County of San Bernardino Reported Communicable Diseases 2014 Diseases Transmitted by Sexual Contact

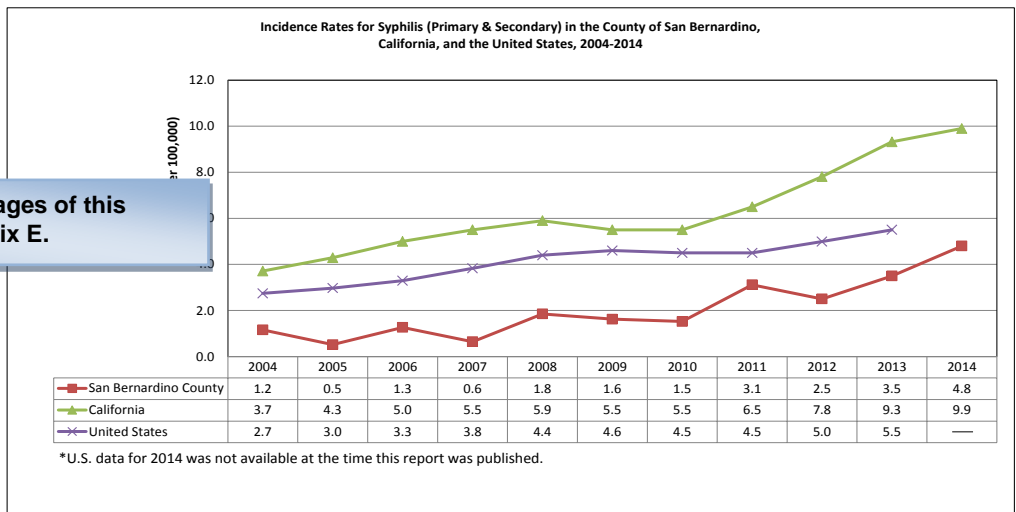
For each selected disease, a ten-year (2004-2014) trending of race/ethnicity distribution among all reported cases is presented in a data table.

Syphilis (Primary & Secondary) Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
			2006	2007	2008	2009	2010	2011	2012	2013	2014
Hispanic	2	4	10	8	18	17	15	33	28	29	46
Asian	2	0	1	0	0	3	0	1	0	3	2
Native Am.	0	0	0	0	0	0	0	0	2	0	0
Other/Multiple	0	1	0	0	0	0	0	3	0	0	2
Not specified	2	0	3	2	7	3	4	10	2	6	2
Total	22	10	25	13	38	34	31	64	51	73	100

For each selected disease, a ten-year (2004-2014) trending of age distribution among all reported cases is presented in a data table.

Syphilis (Primary & Secondary) Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	1	0	4	4	1	7	6	9	9
20-24	2	3	2	2	6	9	11	25	14	19	24
25-29	1	4	3	1	11	8	6	14	9	20	17
30-34	4	1	1	2	1	3	2	4	6	10	9
35-39	5	1	5	3	5	3	5	4	1	4	11
40-44	4	0	4	5	3	1	1	3	6	2	6
45-54	6	1	5	0	5	6	5	5	7	4	17
55-64	0	0	4	0	2	0	0	1	2	4	7
65+	0	0	0	0	1	0	0	1	0	1	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	22	10	25	13	38	34	31	64	51	73	100

Data sources applicable to all pages of this report are referenced in Appendix E.



SECTION 1

SUMMARY OF REPORTED COMMUNICABLE DISEASES

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TABLE 1*: REPORTED COMMUNICABLE DISEASES BY AGE GROUP (IN YEARS)
COUNTY OF SAN BERNARDINO, 2014

Disease Category	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-54	55-64	>65	Unknown	Total
AIDS	0	0	0	0	0	6	17	10	14	13	32	8	2	0	102
Amebiasis	0	0	0	1	1	0	0	0	0	0	1	1	0	0	4
Animal bite/exposure	2	0	0	2	1	0	1	1	0	0	3	1	0	0	11
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, Infant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, Wound	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3
Brucellosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Burkholderia pseudomallei (Melioidosis)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Campylobacteriosis	10	36	19	15	15	11	15	12	14	9	22	28	21	0	227
Chlamydial Infections ¹	0	1	0	58	2445	4336	2082	883	403	222	231	51	15	28	10755
Cholera ²	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coccidioidomycosis	0	0	1	0	1	1	4	3	7	7	11	4	6	0	45
Creutzfeldt-Jakob Disease	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Cryptosporidiosis	0	1	1	0	1	0	0	2	1	1	3	0	0	0	10
Cysticercosis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Dengue	0	0	0	0	1	0	1	0	2	1	0	1	1	0	7
DMV Reportable	2	0	1	0	59	119	115	132	89	84	185	138	238	14	1176
E. coli O157:H7	0	2	0	0	0	1	0	0	0	0	1	1	0	0	5
Encephalitis - Not Otherwise Specified	0	0	0	0	2	0	1	1	0	0	0	0	0	0	4
Encephalitis, Viral	0	0	1	0	1	0	0	1	1	0	3	0	1	0	8
Enterovirus-D68	0	0	3	2	0	0	0	0	0	0	0	0	0	0	5
Giardiasis	1	6	3	1	2	4	6	1	3	3	7	6	10	0	53
Gonococcal Infections ^{1,3}	0	1	0	17	499	871	585	273	140	80	108	26	5	5	2610
Haemophilus Influenzae (Invasive) ⁴	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Hantavirus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis A	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2
Hepatitis B, Acute	0	0	0	0	0	0	0	1	1	5	2	0	0	0	9
Hepatitis B, Chronic	0	1	0	0	4	16	47	73	68	42	91	104	60	2	508
Hepatitis C, Acute	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3
Hepatitis C, Chronic ⁵	7	1	1	2	30	126	227	276	290	304	1383	1523	534	19	4723
Hepatitis D (Delta)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis E, Acute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HIV	1	0	0	0	8	36	38	32	20	20	24	9	2	0	190
Influenza	32	56	52	24	21	34	18	19	20	24	38	49	52	1	440
Influenza ICU Hospitalization/Death	3	5	2	2	2	4	6	2	4	8	20	17	0	0	75
Legionellosis	0	0	0	0	0	0	0	0	1	1	4	4	11	0	21
Leprosy (Hansen's Disease)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2
Listeriosis	1	0	0	0	0	0	1	0	0	0	0	0	1	0	3
Lyme Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malaria	0	0	0	0	0	1	0	1	1	0	0	0	0	0	3
Measles	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Meningitis - Bacterial ⁶	3	0	0	0	0	1	1	1	0	2	3	3	2	0	16
Meningitis - Fungal	0	0	0	0	0	0	1	0	0	0	3	0	1	0	5
Meningitis - Not Otherwise Specified	4	0	0	0	0	1	0	0	0	2	0	1	2	0	10
Meningitis - Viral	5	2	2	6	5	10	14	8	4	4	13	6	11	0	90
Meningococcal Disease (Invasive)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Methicillin-resistant Staphylococcus aureus (MRSA)	0	0	0	0	0	0	0	0	0	0	0	5	2	0	7
Mumps	0	1	1	1	0	1	0	0	1	1	0	0	0	0	6
Outbreak, Foodborne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Outbreak, Other	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9
Paratyphoid Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pelvic Inflammatory Disease	0	0	0	0	6	21	14	6	10	4	3	1	0	0	65
Pertussis	40	37	18	51	33	1	3	3	3	2	7	3	2	2	205
Pneumococcal Disease, Invasive	1	1	1	0	1	0	0	0	1	0	3	5	3	0	16
Q Fever	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Rabies (Animal)	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11
Respiratory Syncytial Virus (RSV)	278	100	11	4	1	0	0	0	1	1	0	3	14	5	418
Rheumatic Fever, Acute	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Rubella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* See Appendices D and E for Footnotes and Data Sources for Table 1

TABLE 1*: REPORTED COMMUNICABLE DISEASES BY AGE GROUP (IN YEARS), 2014 (CONT'D)

Disease Category	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-54	55-64	>65	Unknown	Total
Salmonellosis (Other than Typhoid Fever)	19	34	28	10	6	12	12	7	8	11	13	24	47	2	233
Scombroid Fish Poisoning	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Shiga toxin positive feces	0	1	0	0	0	0	0	0	1	0	0	0	1	0	3
Shigellosis, Group B (Flexneri)	0	0	1	0	0	0	0	0	1	0	3	0	1	0	6
Shigellosis, Group C (Boydii)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis, Group D (Sonnei)	0	0	5	0	1	2	2	1	3	0	0	0	1	0	15
Shigellosis, Unspecified	0	0	1	0	0	2	0	0	0	0	0	0	0	0	3
Staphylococcus Aureus Infection (Severe Case)	0	0	0	0	0	0	0	1	0	0	2	3	3	0	9
STEC non-O157	1	4	1	0	2	2	0	0	0	1	1	0	2	0	14
Syphilis (Congenital)	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Syphilis (Early Latent)	0	0	0	0	5	12	14	11	17	6	16	1	0	0	82
Syphilis (Late/Latent, Unknown Duration)	0	0	0	0	8	38	52	34	19	15	28	11	2	0	207
Syphilis (Primary)	0	0	0	0	3	7	6	3	3	1	8	2	0	0	33
Syphilis (Secondary)	0	0	0	0	6	17	11	6	8	5	9	5	0	0	67
Tuberculosis, Clinically Active	0	2	1	0	1	1	8	5	3	5	6	3	16	0	51
Typhoid Fever	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Typhus and Other Non-Spotted Fever Rickettsioses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Varicella Hospitalization/Death	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Vibrio Infections (Non-Cholera) ²	0	0	0	1	0	0	2	1	0	0	1	1	1	0	7
West Nile virus - Asymptomatic	0	0	0	0	4	0	2	0	0	0	3	0	0	0	9
West Nile virus - Fever	0	0	0	0	0	0	1	0	1	0	1	1	0	0	4
West Nile virus - Neuroinvasive	0	0	0	0	1	0	1	0	0	0	4	7	4	0	17
Yersiniosis	2	0	0	0	0	0	0	0	0	0	0	0	1	0	3

* See Appendices D and E for Footnotes and Data Sources for Table 1

TABLE 2*: REPORTED COMMUNICABLE DISEASES BY RACE/ETHNICITY
COUNTY OF SAN BERNARDINO, 2014

Disease Category	American Indian/ Alaska Native	Asian/Pacific Islander	Black/African- American	Hispanic	Other	White	Unknown	Total
AIDS	1	5	19	52	4	20	1	102
Amebiasis	0	0	0	1	0	0	3	4
Animal bite/exposure	0	0	0	1	0	7	3	11
Anthrax	0	0	0	0	0	0	0	0
Botulism, Infant	0	0	0	2	0	1	0	3
Botulism, Wound	0	0	0	2	0	1	0	3
Brucellosis	0	0	0	0	0	0	0	0
Burkholderia pseudomallei (Meliodiosis)	0	1	0	0	0	0	0	1
Campylobacteriosis	0	3	6	36	10	28	144	227
Chlamydial Infections ¹	32	86	928	1981	259	634	6835	10755
Cholera ²	0	0	0	0	0	0	0	0
Coccidioidomycosis	0	3	8	10	0	8	16	45
Creutzfeldt-Jakob Disease	0	0	0	0	0	0	1	1
Cryptosporidiosis	0	0	0	2	0	4	4	10
Dengue	0	3	0	3	0	1	0	7
DMV Reportable	5	12	116	206	14	301	522	1176
E. coli O157:H7	0	0	0	1	0	4	0	5
Encephalitis - Not Otherwise Specified	0	0	0	3	0	1	0	4
Encephalitis, Viral	0	0	0	2	0	3	3	8
Enterovirus-D68	0	0	0	3	0	1	1	5
Giardiasis	0	0	1	4	0	8	40	53
Gonococcal Infections ^{1,3}	10	16	456	479	71	240	1338	2610
Haemophilus Influenzae (Invasive) ⁴	0	0	1	1	0	0	1	3
Hantavirus Infections	0	0	0	0	0	0	0	0
Hepatitis A	0	0	0	2	0	0	0	2
Hepatitis B, Acute	0	0	1	3	0	5	0	9
Hepatitis B, Chronic	0	219	20	52	29	33	155	508
Hepatitis C, Acute	0	0	0	1	0	2	0	3
Hepatitis C, Chronic ⁵	2	11	80	180	117	328	4005	4723
Hepatitis D (Delta)	0	0	0	0	0	0	0	0
Hepatitis E, Acute	0	0	0	0	0	0	0	0
HIV	3	9	34	95	5	44	0	190
Influenza	2	8	16	92	19	84	219	440
Influenza ICU Hospitalization/Death	0	2	0	37	2	20	14	75
Legionellosis	0	1	1	8	1	10	0	21
Leptospirosis	0	0	1	0	0	0	1	2
Leprosy (Hansen's Disease)	0	0	0	0	0	0	0	0
Listeriosis	0	0	0	3	0	0	0	3
Lyme Disease	0	0	0	0	0	0	0	0
Malaria	0	0	2	0	0	0	1	3
Measles (Rubeola)	0	0	0	1	0	0	0	1
Meningitis - Bacterial ⁶	0	1	3	7	0	4	1	16
Meningitis - Fungal	0	1	1	2	1	0	0	5
Meningitis - Not Otherwise Specified	0	0	0	7	0	3	0	10
Meningitis - Viral	0	2	4	33	3	38	10	90
Meningococcal Disease (Invasive)	0	0	1	0	0	0	0	1
Methicillin-resistant Staphylococcus aureus (MRSA)	0	1	0	2	0	2	2	7
Mumps	0	0	0	3	0	3	0	6
Outbreak, Foodborne	0	0	0	0	0	0	0	0
Outbreak, Other	0	0	0	0	0	0	9	9
Paratyphoid Fever	0	0	0	0	0	0	0	0
Pelvic Inflammatory Disease	1	0	4	22	2	17	19	65
Pertussis	0	2	5	108	6	58	26	205
Pneumococcal Disease, Invasive	0	0	1	4	0	4	7	16

*See Appendices D and E for Footnotes and Data Sources for Table 2

TABLE 2*: REPORTED COMMUNICABLE DISEASES BY RACE/ETHNICITY
COUNTY OF SAN BERNARDINO, 2014 (CONTINUED)

Disease Category	American Indian/ Alaska Native	Asian/Pacific Islander	Black/African- American	Hispanic	Other	White	Unknown	Total
Q Fever	0	0	0	1	0	1	0	2
Rabies (Animal)	0	0	0	0	0	0	11	11
Respiratory Syncytial Virus (RSV)	1	5	22	120	14	68	188	418
Rheumatic Fever, Acute	0	0	0	0	0	1	0	1
Rubella	0	0	0	0	0	0	0	0
Salmonellosis (Other than Typhoid Fever)	1	14	12	89	3	76	38	233
Scombroid Fish Poisoning	0	0	0	1	0	0	0	1
Shiga toxin positive feces	0	0	0	1	0	1	1	3
Shigellosis, Group B (Flexneri)	0	1	1	1	0	2	1	6
Shigellosis, Group C (Boydii)	0	0	0	0	0	0	0	0
Shigellosis, Group D (Sonnei)	0	0	0	11	0	2	2	15
Shigellosis, Unspecified	0	0	0	3	0	0	0	3
Staphylococcus Aureus Infection (Severe Case)	0	1	0	4	0	4	0	9
STEC non-O157	0	1	1	6	0	3	3	14
Syphilis (Congenital)	0	0	0	1	0	2	1	4
Syphilis (Early Latent)	0	0	10	50	1	19	2	82
Syphilis (Late/Latent, Unknown Duration)	0	5	34	99	8	24	37	207
Syphilis (Primary)	0	0	5	17	0	10	1	33
Syphilis (Secondary)	0	2	12	29	2	21	1	67
Tuberculosis, Clinically Active	0	18	1	29	0	3	0	51
Typhoid Fever	0	1	0	0	0	1	0	2
Typhus and Other Non-Spotted Fever Rickettsioses	0	0	0	0	0	0	0	0
Varicella Hospitalization/Death	0	0	0	0	0	0	3	3
Vibrio Infections (Non-Cholera) ²	1	0	0	4	0	1	1	7
West Nile virus - Asymptomatic	0	0	1	4	0	3	1	9
West Nile virus - Fever	0	0	0	2	0	1	1	4
West Nile virus - Neuroinvasive	0	0	0	12	0	3	2	17
Yersiniosis	0	2	1	0	0	0	0	3

* See Appendices D and E for Footnotes and Data Sources for Table 2

SECTION 2

INCIDENCE DATA FOR SELECTED DISEASES BY PRIMARY MODE OF TRANSMISSION

HEPATITIS B (ACUTE)

VACCINE-PREVENTABLE

Infectious Agent: hepatitis B virus (HBV)

Mode of Transmission: Contact with infected body fluids containing blood or blood products; saliva; cerebrospinal fluid; peritoneal, pleural, pericardial and synovial fluid; amniotic fluid; semen and vaginal secretions

Incubation Period: 60-90 days on average (range: 45-180 days)

Symptoms: Anorexia (loss of appetite), abdominal discomfort, nausea and vomiting, arthralgias and rash, jaundice, and in some cases fever.

Vaccine: Available since 1982

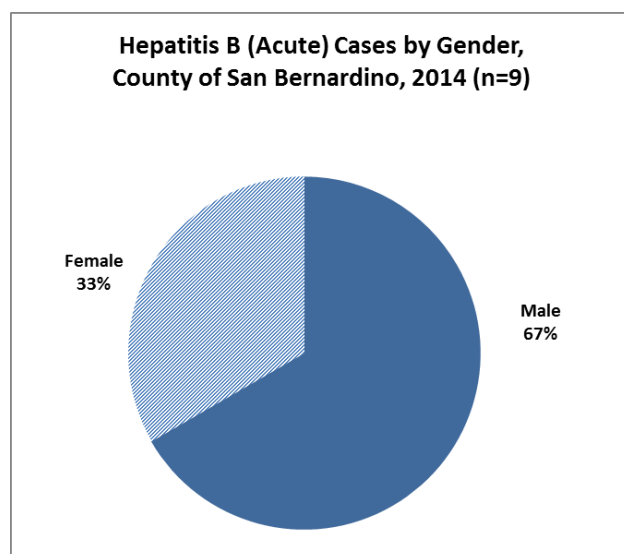
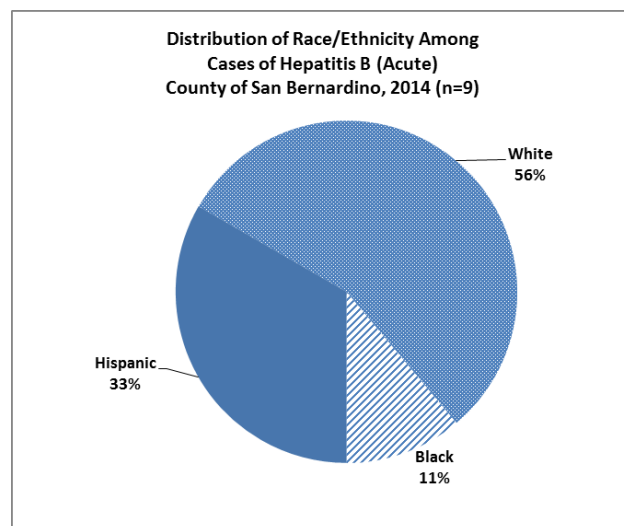
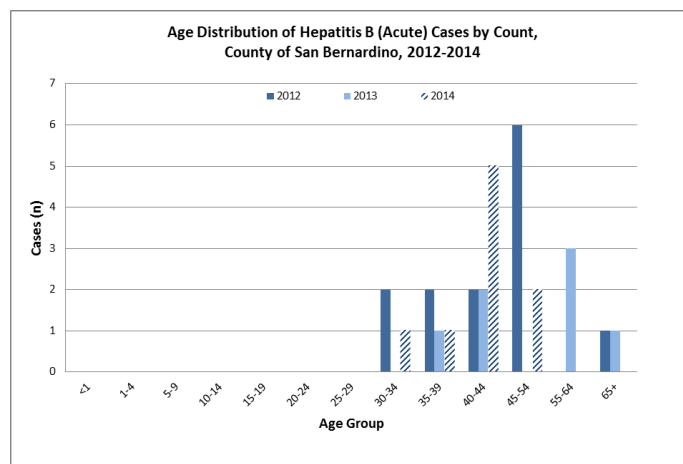
For more information: <http://www.cdc.gov/hepatitis>

2014 REVIEW

- Incidence rates in the County of San Bernardino have decreased from 1.3 cases per 100,000 in 2002 and remained below 0.8 cases per 100,000 since 2004.
- Rates of acute hepatitis B in California and United States have also decreased since 2003.
- The greatest proportion of cases occurred among White (56%) and Hispanic (33%) populations, comparable to previous years. Cell counts were less than 5 so reliable estimates of incidence could not be calculated.
- Cases are concentrated in the adult population over 30 years of age.
- Sixty-seven percent of acute cases occurred in males.
- The greatest risk factors among cases during their exposure period were sexual contact (50%), IV injections done at hospitals (33%) and dental procedures (33%). Other major risk factors observed in previous years were blood donation, prior hospitalization, tattoos, body piercing, and incarceration. The risk factors were not mutually exclusive and some cases had multiple risk factors.

PREVENTION

- Children should receive the first dose of the hepatitis B vaccine at birth and complete the series of three shots by age 6-18 months. Children under the age of 19 who have not been vaccinated should receive catch-up doses.
- Infants born to mothers who either currently have an acute hepatitis B infection or are chronic hepatitis B infection carriers should be vaccinated and receive HBIG within 12 hours of birth; 90% of infected infants develop chronic infection without this intervention and are therefore at higher risk for liver cancer and cirrhosis.
- People who are at high risk (e.g. injection drug users, men who have sex with men, incarcerated persons, hemodialysis patients), including healthcare workers and those who live with someone who has hepatitis B, should receive the hepatitis B vaccine.
- Use a condom and practice safe sex.
- Limit sharing of personal items such as razors or toothbrushes and use sterile needles for tattoos, piercings, and injections.

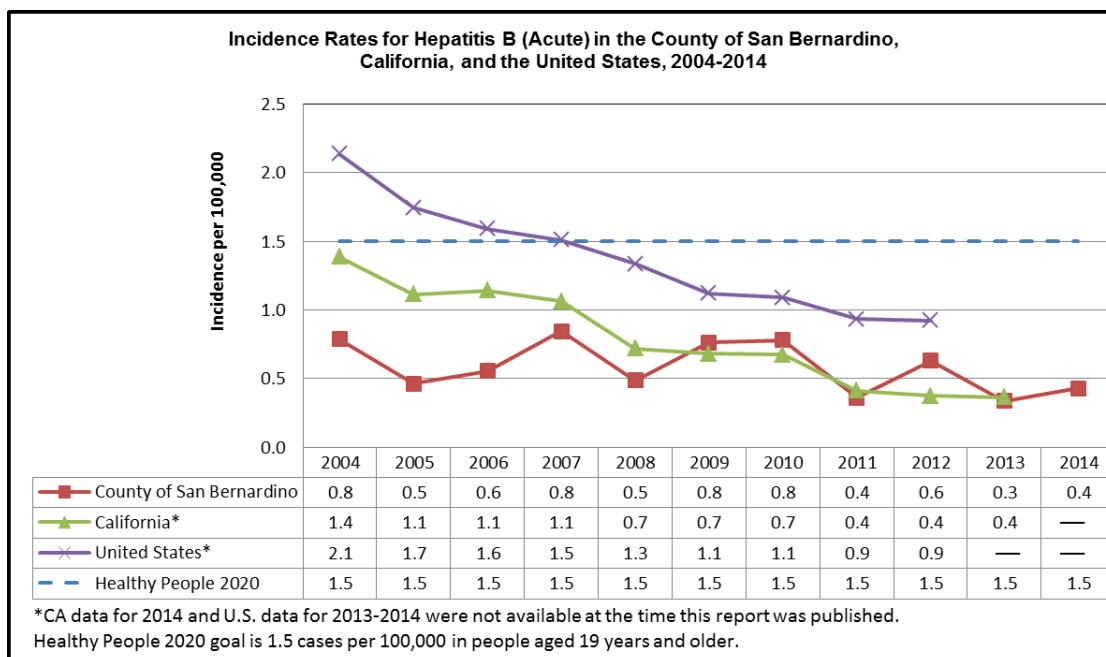


HEPATITIS B (ACUTE)

VACCINE-PREVENTABLE

Hepatitis B (Acute) Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	4	2	3	8	5	4	4	2	4	4	5
Black	4	2	3	3	1	4	2	1	1	0	1
Hispanic	1	3	1	5	2	5	7	4	7	2	3
Asian/PI	0	0	2	1	0	1	3	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	6	2	2	0	2	2	1	1	1	1	0
Total	15	9	11	17	10	16	17	8	13	7	9

Hepatitis B (Acute) Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	1	0	0	0	0	0	1	0	0	0
20-24	1	4	0	1	0	1	0	0	0	0	0
25-29	2	1	2	2	2	1	3	0	0	0	0
30-34	4	0	2	2	2	3	3	0	2	0	1
35-39	2	2	2	1	1	2	2	2	2	1	1
40-44	1	1	0	5	0	2	3	0	2	2	5
45-54	3	0	4	6	4	2	2	3	6	0	2
55-64	1	0	1	0	0	2	3	2	0	3	0
65+	1	0	0	0	1	3	1	0	1	1	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	15	9	11	17	10	16	17	8	13	7	9



HEPATITIS C (ACUTE)

Infectious Agent: hepatitis C virus (HCV)

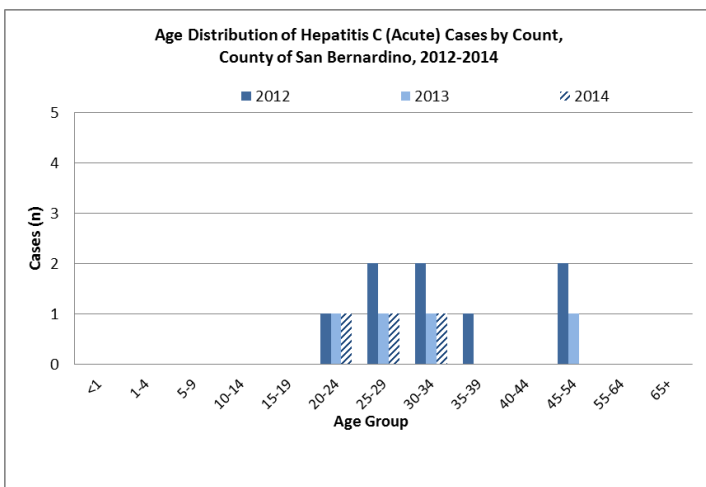
Mode of Transmission: Percutaneous (i.e. through the skin) contact with infected body fluids containing blood or blood products such as through injection drug use (IDU), needle stick injuries, receipt of blood or blood products

Incubation period: commonly 6-9 weeks (range: 2 weeks to 6 months)

Symptoms: anorexia (loss of appetite), abdominal discomfort, nausea and vomiting; late manifestations of chronic infection include liver cancer and cirrhosis

Vaccine: None

For more information: <http://www.cdc.gov/hepatitis>

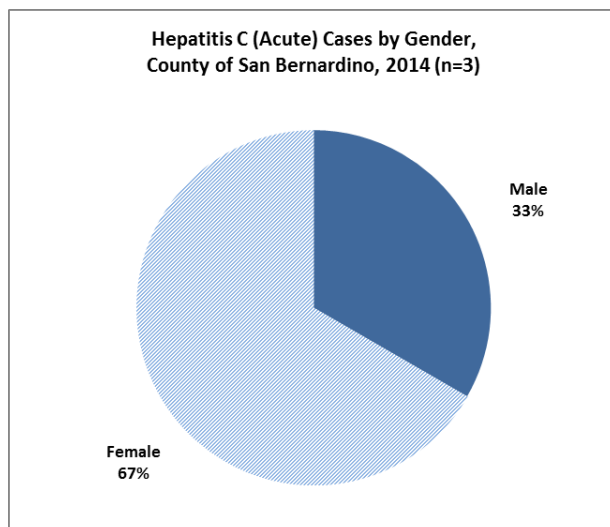
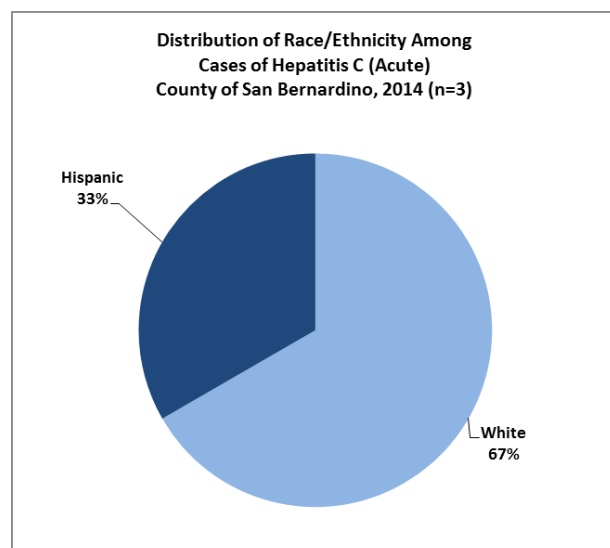


2014 REVIEW

- Incidence dropped below the Healthy People 2020 goal of 0.2 cases per 100,000 people to 0.1 cases per 100,000 in 2014.
- Two-thirds of cases occurred in females.
- The greatest proportion of cases occurred in the White (67%) and Hispanic (33%) populations.
- Acute hepatitis C infections were highest among adults aged 20-54 years; however, counts in each age category were less than 5 so incidence rates are not reliable.
- As in 2013, the greatest risk factors observed among cases during their exposure period were incarceration (67%), tattoos (67%) and intravenous drug use (67%), and contact with a confirmed carrier of hepatitis C (67%). Other risk factors observed in previous years among cases were sexual contact, needlesticks, and body piercing. The risk factors were not mutually exclusive and some cases had multiple risk factors.

PREVENTION

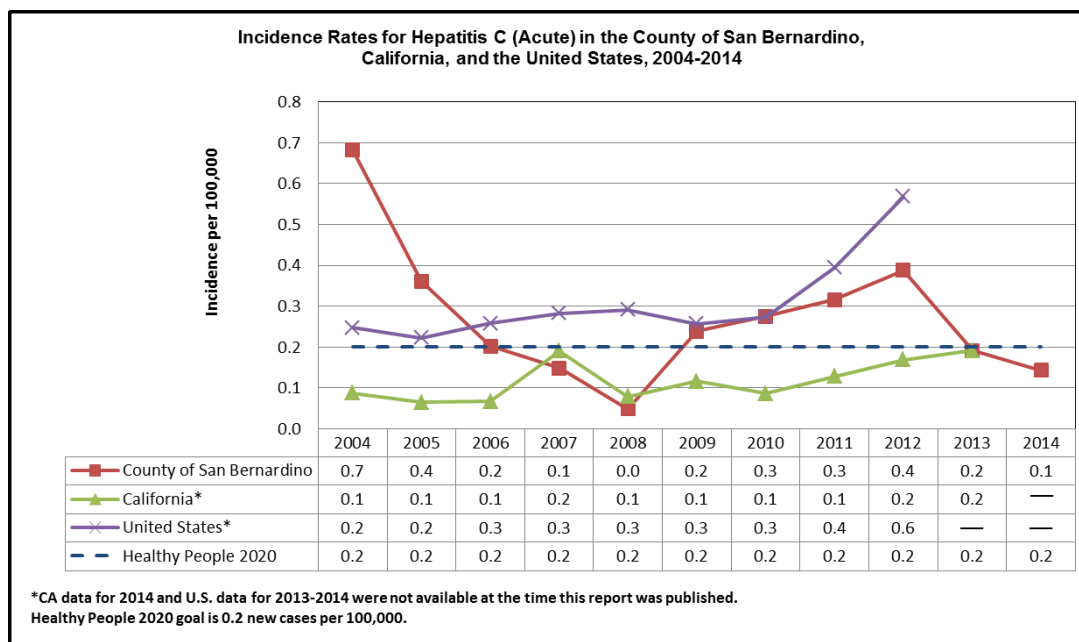
- Avoid contact with blood or blood products whenever possible. Healthcare workers should use precautions when handling blood and bodily fluids.
- Use sterile needles for tattoos, piercings, and injections.
- Sexual transmission is low among stable, monogamous couples. People who have sex outside of a monogamous relationship should practice safe sex behaviors to avoid hepatitis C and other sexually-transmitted infections.



HEPATITIS C (ACUTE)

Hepatitis C (Acute) Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	5	2	2	1	0	0	1	5	3	2	2
Black	1	0	1	0	1	0	1	1	0	0	0
Hispanic	5	2	1	1	0	5	3	1	5	2	1
Asian/PI	1	0	0	0	0	0	0	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	1	3	0	1	0	0	1	0	0	0	0
Total	13	7	4	3	1	5	6	7	8	4	3

Hepatitis C (Acute) Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0	0	0
20-24	2	1	1	0	0	0	0	0	1	1	1
25-29	0	0	0	0	0	0	1	2	2	1	1
30-34	0	1	1	1	0	0	0	2	2	1	1
35-39	2	1	0	0	0	0	2	1	1	0	0
40-44	3	1	0	0	0	0	2	0	0	0	0
45-54	2	1	2	2	0	5	0	2	2	1	0
55-64	3	2	0	0	1	0	0	0	0	0	0
65+	1	0	0	0	0	0	1	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	13	7	4	3	1	5	6	7	8	4	3



AMEBIASIS

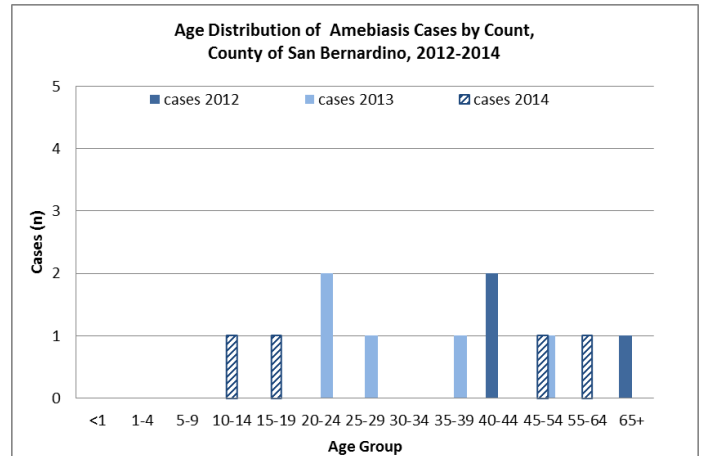
Infectious Agent: *Entamoeba histolytica*, a parasite
Mode of Transmission: Fecal-oral route, usually via contaminated food or water; oral-anal contact also plays a role
Incubation Period: 2-4 weeks (range: a few days to several months)
Symptoms: Most infections are asymptomatic; diarrhea with blood and/or mucous, abdominal pain, & fever alternating with periods of constipation
Vaccine: None
For more information:
<http://www.cdc.gov/parasites/amebiasis/>

2014 REVIEW

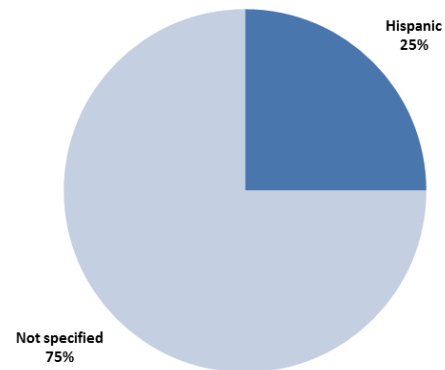
- Incidence in the County of San Bernardino is consistently lower than in California. Total reported cases per year has been fewer than 5 since 2009.
- Race/ethnicity distribution was difficult to assess in 2014 as data was incomplete.
- Males comprised nearly 75% of cases, an increase from 40% in 2013. However, total cases in both years was small.
- Age distribution in 2014 expanded to include younger age groups. Numbers of cases for the last several years has been less than 5.

PREVENTION

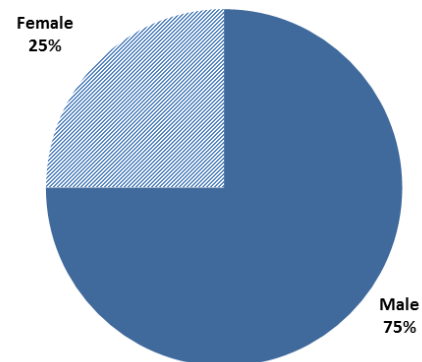
- The risk of spreading infection is low if the infected person is treated with appropriate antibiotics and practices good personal hygiene. This includes thorough hand washing with soap and water after using the toilet, after changing diapers, and before handling food.
- Avoid food that may have been washed in contaminated water and or handled by vendors without adequate hand washing facilities.
- Use a barrier for oral-anal sex and a condom during anal sex. Wash hands after handling the condom or touching the anal area.
- Use a water purification method such as filtration or iodine treatment before drinking surface water (e.g. water from lakes, rivers, and ponds).
- Everyone, especially workers in higher risk settings such as daycare centers or restaurants, should use good hand washing techniques with soap and water. Infected workers should not prepare food or drinks until tested and cleared by the health department.



Distribution of Race/Ethnicity Among Amebiasis Cases, County of San Bernardino, 2014 (n=4)



Distribution of Amebiasis Cases by Gender, County of San Bernardino, 2014 (n=4)

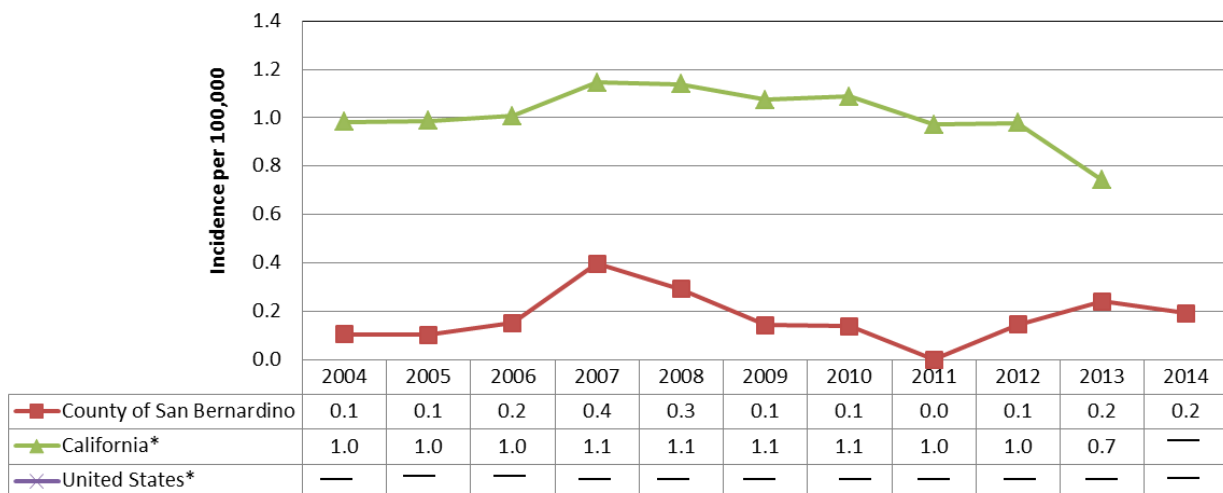


AMEBIASIS

Amebiasis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	0	1	2	2	0	0	1	0	1	2	0
Black	0	0	0	1	0	0	0	0	0	0	0
Hispanic	1	0	1	4	4	1	2	0	1	2	1
Asian/PI	0	1	0	0	1	1	0	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	1	0	0	1	1	1	0	0	1	1	3
Total	2	2	3	8	6	3	3	0	3	5	4

Amebiasis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	2	0	0	0	0	0	0	0
10-14	0	0	0	1	1	0	0	0	0	0	1
15-19	0	0	1	2	1	1	0	0	0	0	1
20-24	0	0	0	0	0	0	0	0	0	2	0
25-29	0	1	0	0	0	0	0	0	0	1	0
30-34	0	1	0	0	2	0	1	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	1	0
40-44	1	0	1	2	0	0	0	0	2	0	0
45-54	0	0	0	1	1	0	2	0	0	1	1
55-64	1	0	1	0	0	1	0	0	0	0	1
65+	0	0	0	0	1	1	0	0	1	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	3	8	6	3	3	0	3	5	4

Incidence Rates for Amebiasis in the County of San Bernardino, California, and the United States, 2004-2014



*Amebiasis is not a nationally-notifiable disease. Therefore, U.S. data is not available. CA data for 2014 was not available at the time this report was published.

CAMPYLOBACTERIOSIS

Infectious Agent: Commonly *Campylobacter jejuni*, a bacteria

Mode of Transmission: Fecal-oral route through ingestion of contaminated food, water, or milk; undercooked meat, especially poultry; contact with infected pets, farm animals, or infants

Incubation Period: 2-5 days average (range: 1-10 days)

Symptoms: Diarrhea (frequently with bloody stools), abdominal pain, fever, nausea and/or vomiting

Vaccine: None

For more information:

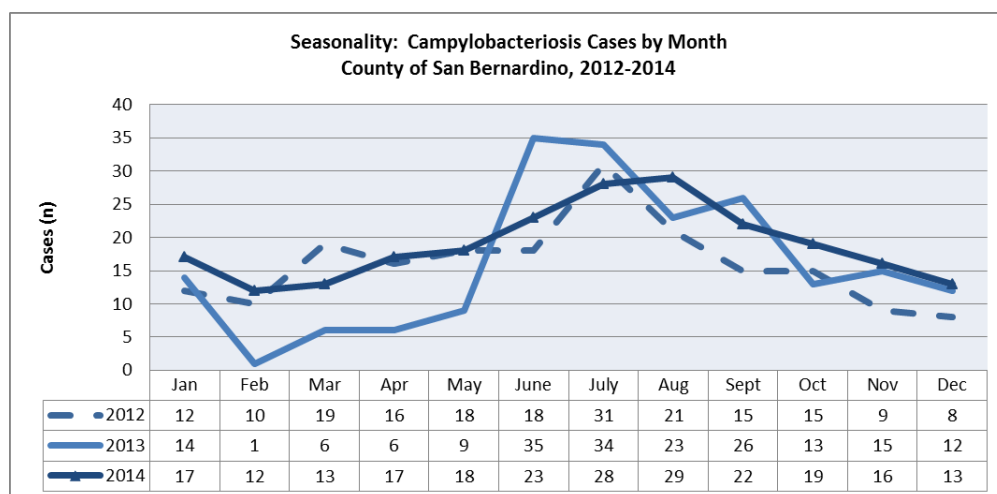
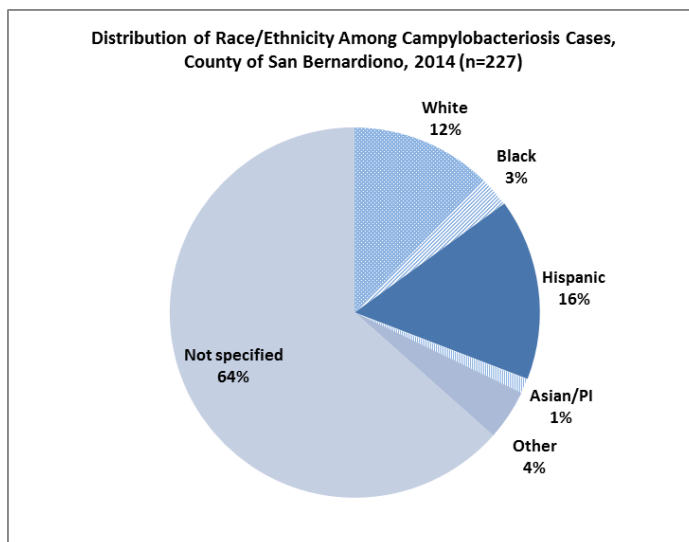
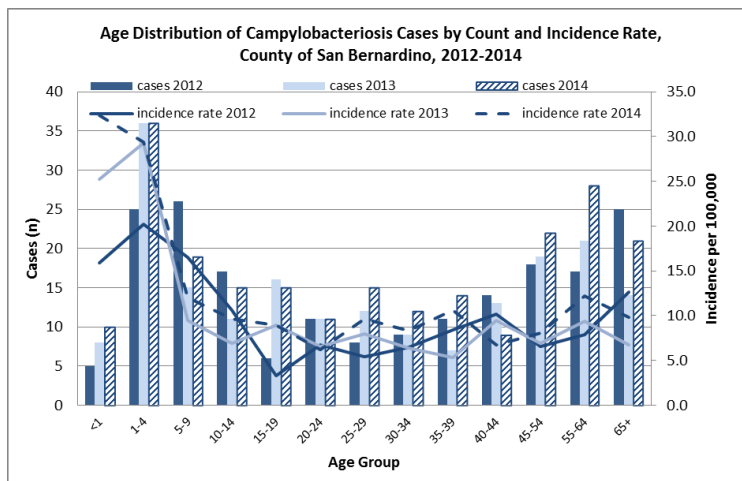
<http://www.cdc.gov/nczved/divisions/dfbmd/diseases/campylobacter/>

2014 REVIEW

- Incidence has increased to the highest in the last 10 years to 10.8 cases per 100,000 population. Incidence in California is consistently higher than in the County of San Bernardino, often twice as high or greater.
- Nearly two-thirds (64%) of cases had incomplete data on race/ethnicity, making analysis of incidence by race/ethnicity inconclusive.
- Campylobacteriosis rates were highest among those aged <1 year of age (32.3 cases per 100,000) and children 1-4 years of age (29.4 cases per 100,000), comparable with past years' trends.
- Males (48%) and females (52%) comprised almost equal proportions of cases, also comparable with past years' trends.
- Cases increased during mid-summer to fall, June-October, consistent with past trends in seasonality.

PREVENTION

- Cook all poultry products until it reaches a minimum internal temperature of 165°F.
- Wash hands with soap and water before preparing food, after handling raw foods of animal origin (meat and poultry), after handling pet feces, and after changing diapers.
- Prevent cross-contamination in the kitchen by using separate cutting boards for foods of animal origin and other foods. Clean all cutting boards, countertops and utensils with soap and hot water after preparing raw food of animal origin before placing cooked or other food items on these surfaces.
- Avoid consuming unpasteurized milk and untreated surface water.
- Make sure that persons with diarrhea, especially children, wash their hands carefully and frequently with soap and water to reduce the risk of spreading the infection.



CAMPYLOBACTERIOSIS

Campylobacteriosis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	26	38	33	43	58	44	43	58	60	20	28
Black	4	4	2	4	13	8	3	2	4	3	6
Hispanic	41	44	44	52	75	60	70	95	71	24	36
Asian/PI	2	2	8	5	8	5	5	1	2	1	3
Native Am.	0	0	0	1	0	0	0	1	0	0	0
Other	0	1	0	0	0	1	0	3	5	5	10
Not specified	31	17	8	8	11	31	31	27	50	141	144
Total	104	106	95	113	165	149	152	187	192	194	227

Campylobacteriosis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	8	2	3	4	5	2	2	6	5	8	10
1-4	20	17	17	26	25	32	23	31	25	36	36
5-9	12	12	11	13	22	17	22	12	26	15	19
10-14	7	8	8	2	9	12	8	10	17	11	15
15-19	3	6	5	8	11	7	14	16	6	16	15
20-24	1	3	4	4	10	9	5	14	11	11	11
25-29	4	6	3	6	11	9	5	12	8	12	15
30-34	6	6	5	4	7	3	4	8	9	9	12
35-39	7	5	5	5	7	5	8	13	11	7	14
40-44	5	6	5	7	7	9	9	12	14	13	9
45-54	13	13	14	14	22	12	19	21	18	19	22
55-64	10	12	5	10	18	19	16	18	17	21	28
65+	8	10	10	10	11	13	17	14	25	14	21
Unknown	0	0	0	0	0	0	0	0	0	2	0
Total	104	106	95	113	165	149	152	187	192	194	227

Incidence Rates for Campylobacteriosis in the County of San Bernardino, California, and the United States, 2004-2014



*Campylobacteriosis is not a nationally-notifiable disease, therefore, U.S. data is not available. CA data for 2014 was not available at the time this report was published.

GIARDIASIS

Infectious Agent: *Giardia lamblia*, a parasite

Mode of Transmission: Fecal-oral route through ingestion of cysts from the feces of an infected person or animal, usually via contaminated food or water; anal sex also contributes to transmission

Incubation Period: 7-10 days average (range: 3-25 days or longer)

Symptoms: Frequent diarrhea, with loose pale, greasy stools; abdominal cramps; bloating; fatigue; malabsorption of fats & fat-soluble vitamins

Vaccine: None

For more information: <http://www.cdc.gov/parasites/giardia/>

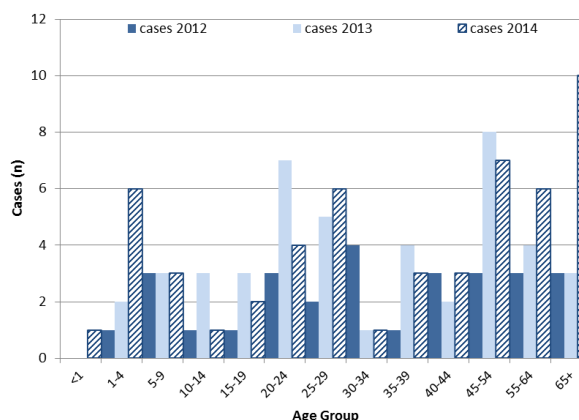
2014 REVIEW

- Incidence in the County of San Bernardino increased slightly in 2014, but has remained close to 2.0 cases per 100,000 population since 2007. Incidence is lower than in both California and the United States, often between one-half to one-third of the state and national incidence rates.
- Seventy-five percent (75%) of cases had incomplete race/ethnicity data reported in 2014.
- Adults aged >65 years and 45-54 years had the highest number of cases and incidence (8.2 cases per 100,000 and 5.7 cases per 100,000, respectively). All incidence rates not published as some cell counts were less than 5.
- Males (51%) and females (49%) comprised about equal proportions of cases.
- Giardiasis demonstrated irregular seasonality, with the largest proportion of cases reported from June to December in 2014.

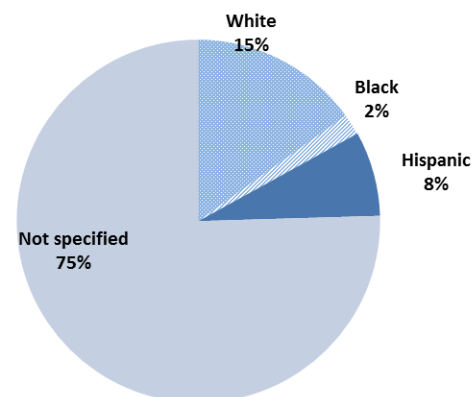
PREVENTION

- Use a water purification method such as boiling, filtration or iodine treatment before drinking surface water (e.g. water from lakes, rivers, and ponds). Hikers or others who use surface water should consider all water sources as potentially contaminated.
- Workers in higher risk settings, such as day care centers or institutions, should use good hand washing techniques when diapering multiple children or caring for multiple patients.
- Avoid food that may have been washed in contaminated water and or handled by vendors without adequate hand washing facilities.
- Use a barrier for oral-anal sex and a condom during anal sex. Wash hands after handling the condom or touching the anal area.

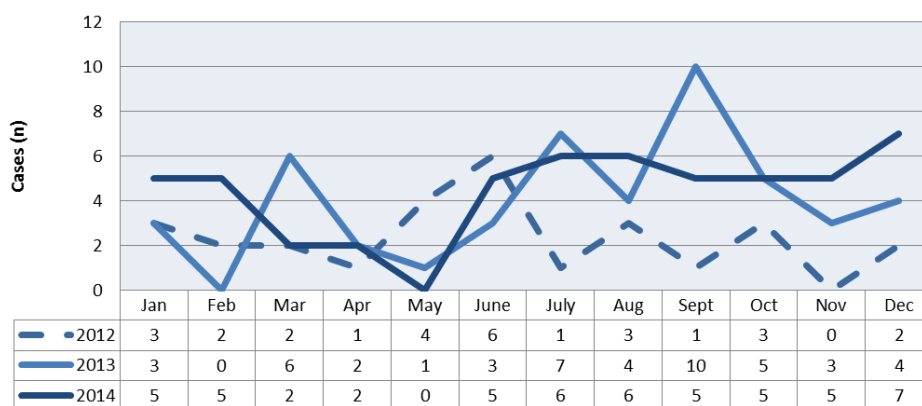
Age Distribution of Giardiasis Cases by Count, County of San Bernardino, 2012-2014



Distribution of Giardiasis Cases by Race/Ethnicity, County of San Bernardino, 2014 (n=53)



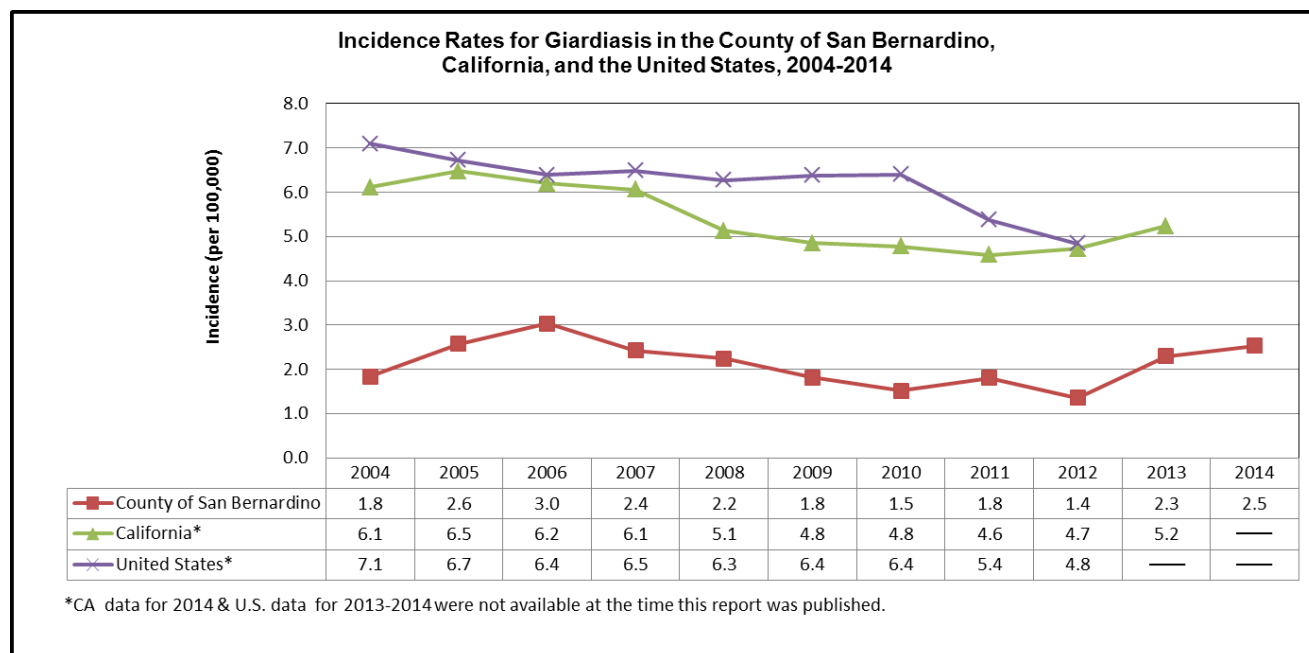
Seasonality: Giardiasis Cases by Month, County of San Bernardino, 2012-2014



GIARDIASIS

Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	11	20	27	17	21	13	15	17	10	1	8
Black	5	6	1	1	2	0	1	3	0	0	1
Hispanic	12	14	26	26	16	16	10	14	10	3	4
Asian/PI	0	3	1	2	2	2	1	1	1	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	1	0	0	0	1	0	0	1	0
Not specified	7	7	4	3	5	7	5	5	7	43	40
Total	35	50	60	49	46	38	33	40	28	48	53

Giardiasis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	1	0	2	1	0	0	0	0	1
1-4	8	13	9	15	7	6	7	11	1	2	6
5-9	3	4	10	7	6	7	2	4	3	3	3
10-14	2	3	5	2	2	0	1	1	1	3	1
15-19	2	1	0	1	1	0	2	1	1	3	2
20-24	1	2	1	1	1	4	2	2	3	7	4
25-29	3	3	1	0	3	4	3	2	2	5	6
30-34	3	1	4	4	4	1	1	2	4	1	1
35-39	2	5	2	5	1	1	4	2	1	4	3
40-44	5	4	6	4	6	4	1	3	3	2	3
45-54	4	6	9	6	8	4	5	4	3	8	7
55-64	1	7	9	4	1	4	2	4	3	4	6
65+	1	1	3	0	4	2	3	4	3	3	10
Unknown	0	0	0	0	0	0	0	0	0	3	0
Total	35	50	60	49	46	38	33	40	28	48	53



HEPATITIS A

VACCINE-PREVENTABLE

Infectious Agent: hepatitis A virus (HAV)

Mode of Transmission: Person-to-person by the fecal-oral route

Incubation Period: 28-30 days average (range: 15-50 days)

Symptoms: Decreased appetite, abdominal discomfort, nausea, jaundice, dark urine; illness in children is frequently asymptomatic or mild

Vaccine: Available since 1995 for high-risk groups such as international travelers; since 1999 recommended as routine vaccination for children ≥ 2 years in high-incidence areas; in 2007, recommended for all children aged 12-23 months

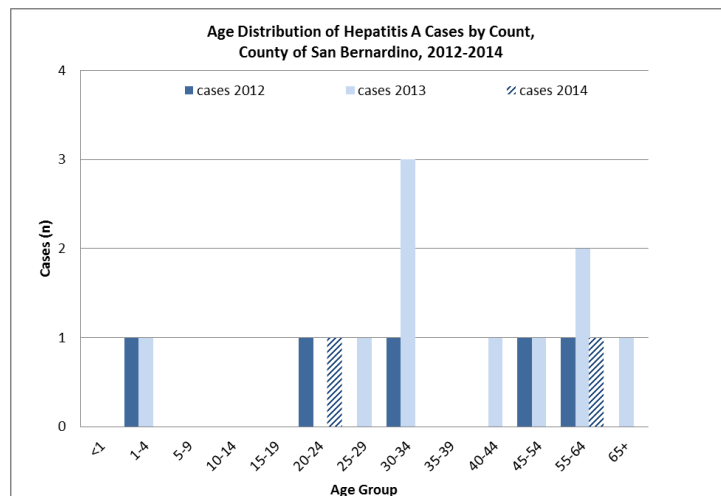
For more information: <http://www.cdc.gov/hepatitis>

2014 REVIEW

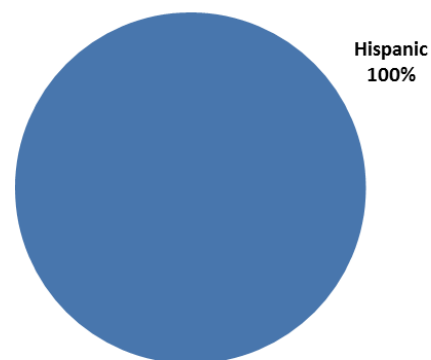
- Acute hepatitis A incidence had been decreasing steadily since 2005. Incidence in 2013 more than doubled from the previous year due to a national outbreak associated with frozen berries. San Bernardino County reported four cases that were associated with that outbreak. 2014 incidence dropped below pre-outbreak levels and below the Healthy People 2020 goal.
- All cases occurred among Hispanic residents (100%).
- All hepatitis A cases occurred among adults.
- Cases were distributed evenly between males (50%) and females (50%).
- The only risk factor reported during 2014 cases' exposure period was international travel (50%). One case did not have risk factor information available.

PREVENTION

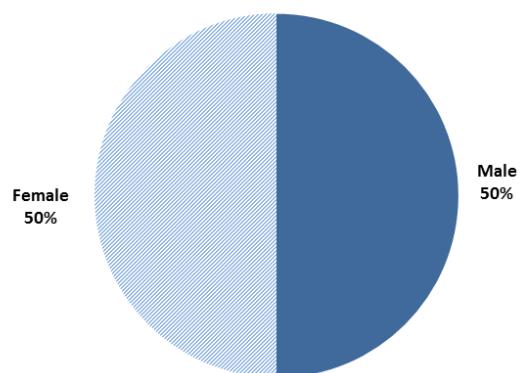
- Hepatitis A is a vaccine preventable disease. The hepatitis A vaccine is a two-dose vaccine series. Protection begins four weeks after receiving the first dose. One additional dose six months after the first dose is required for best protection against disease.
- Always wash hands after using the restroom and after coming in contact with an infected person's stools.
- The virus may spread more rapidly through daycare centers and other places where people are in close contact. Thorough hand washing before and after each diaper change, before serving food, and after using the restroom may help prevent outbreaks.
- Travelers should take precautions and avoid food that may have been washed in contaminated water and or handled by vendors without adequate hand washing facilities. Travelers should also be vaccinated against hepatitis A (and possibly hepatitis B) if traveling to highly endemic areas (e.g. Africa, Middle East, Central and South America, eastern Europe, & Asia).



Distribution of Race/Ethnicity Among Hepatitis A Cases, County of San Bernardino, 2014 (n=2)



Distribution of Hepatitis A Cases by Gender, County of San Bernardino, 2014 (n=2)



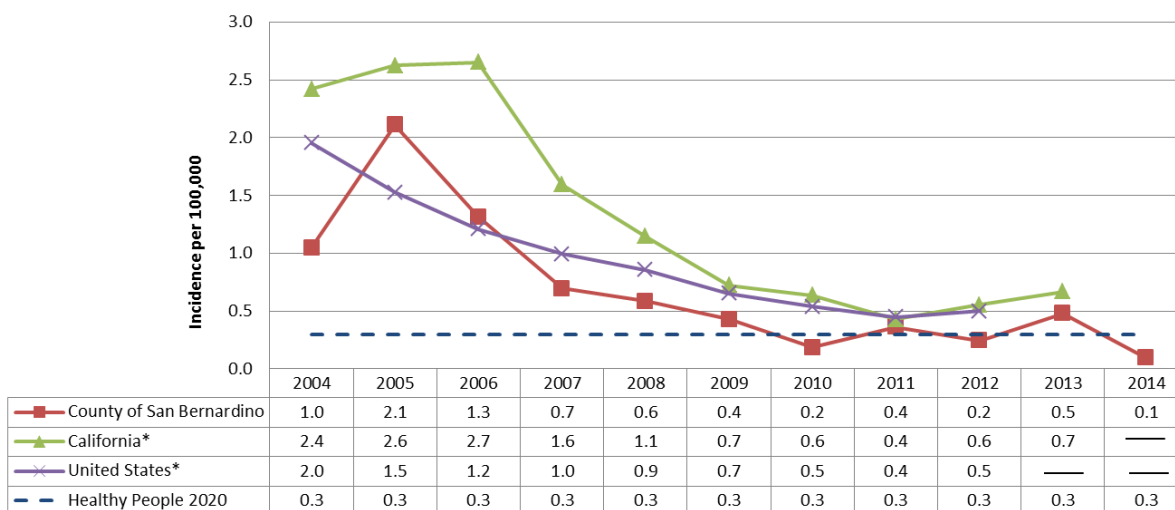
HEPATITIS A

VACCINE-PREVENTABLE

Hepatitis A Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	5	10	8	8	7	0	0	6	3	5	0
Black	0	1	3	1	0	1	0	0	0	0	0
Hispanic	9	20	11	3	3	3	4	1	2	4	2
Asian/PI	2	3	1	0	0	0	0	0	0	1	0
Native Am.	1	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	1	0	0	0
Not specified	3	7	3	2	2	5	0	0	0	0	0
Total	20	41	26	14	12	9	4	8	5	10	2

Hepatitis A Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	1	1	1	0	0	0	0	0	1	1	0
5-9	1	1	0	1	0	0	0	0	0	0	0
10-14	2	3	2	0	0	0	0	0	0	0	0
15-19	3	7	3	1	2	0	1	0	0	0	0
20-24	0	8	3	2	1	2	1	0	1	0	1
25-29	3	4	1	1	0	1	0	0	0	1	0
30-34	1	2	1	1	2	1	1	0	1	3	0
35-39	3	0	1	1	1	0	0	2	0	0	0
40-44	3	2	0	0	1	1	0	0	0	1	0
45-54	3	10	9	4	1	2	1	5	1	1	0
55-64	0	2	3	3	2	1	0	1	1	2	1
65+	0	1	2	0	2	1	0	0	0	1	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	20	41	26	14	12	9	4	8	5	10	2

Incidence Rates for Hepatitis A in the County of San Bernardino, California, and the United States, 2004-2014



*CA data for 2014 and U.S. data for 2013-2014 were not available at the time this report was published.
Healthy People 2020 goal is 0.3 cases per 100,000 population.

LISTERIOSIS

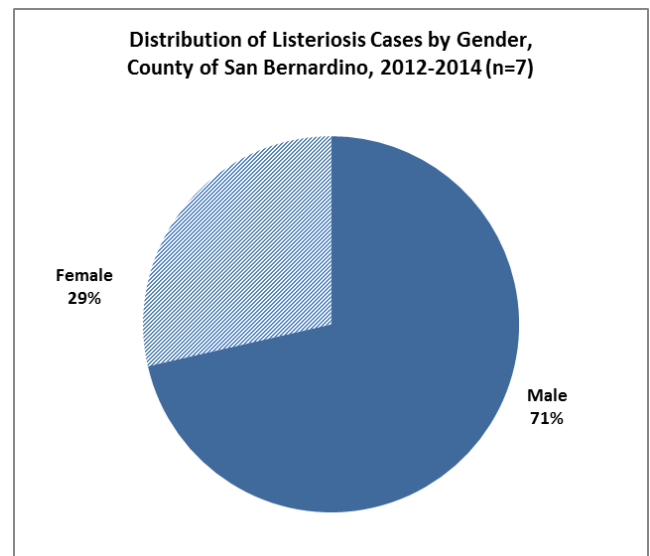
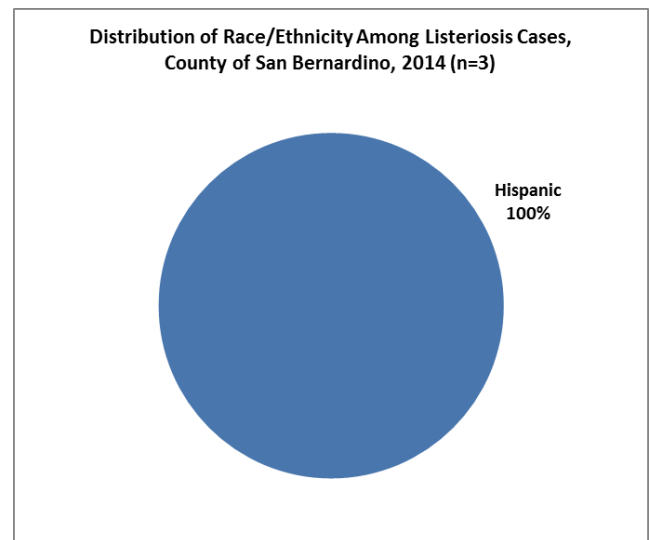
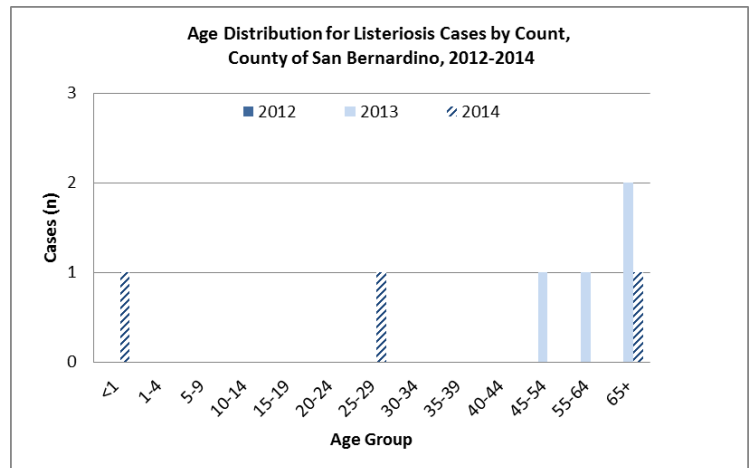
Infectious Agent: *Listeria monocytogenes*, a bacteria
Mode of Transmission: Fecal-oral route, usually via contaminated food or water; commonly associated with foods such as raw or contaminated milk, soft cheeses, ready-to-eat meats (hot dogs, deli meat), raw produce
Incubation Period: 3 weeks, estimated (range: 3-70 days)
Symptoms: Usually a mild fever, muscle aches, & diarrhea, but can cause blood and cerebrospinal fluid infections; in pregnant women, can cause preterm delivery, miscarriage and/or fetal infection
Vaccine: None
For more information: <http://www.cdc.gov/listeria/index.html>

2014 REVIEW

- Incidence in the County of San Bernardino is lower or comparable to incidence in California and the United States. Total reported cases per year has been less than or equal to 5 since 2006.
- All reported cases occurred among Hispanics, an increase from 50% in 2013. Case counts in the last several years were less than 5.
- Incidence occurred among adults 45 years and older, consistent with age distribution observed in previous years.
- Over the last 3 years, males comprised 71% of cases.

PREVENTION

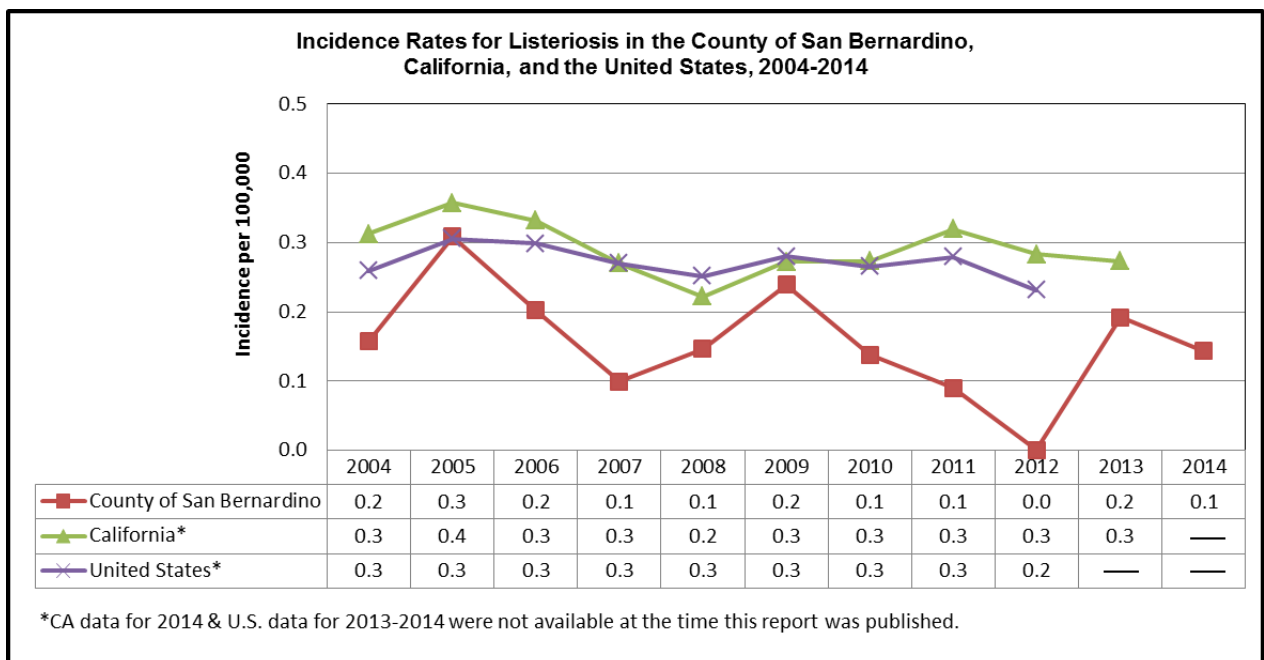
- Thoroughly wash raw fruits and vegetables before eating.
- Wash the outside skin of firm produce (melons and cucumbers) even if the produce will be peeled.
- Be aware that *Listeria monocytogenes* can grow in foods in the refrigerator. Use an appliance thermometer, such as a refrigerator thermometer, to check the temperature inside your refrigerator. The refrigerator should be 40°F or lower and the freezer 0°F or lower.
- Clean up all spills in your refrigerator right away—especially juices from hot dog and lunch meat packages, raw meat, and raw poultry.
- High risk individuals (pregnant women, immunocompromised persons, older adults) should avoid hot dogs (unless heated to an internal temperature of 165°F), lunch meats, and soft cheeses (unless made with pasteurized milk), and avoid refrigerated smoked seafood (e.g. lox).



LISTERIOSIS

Listeriosis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	1	2	1	0	1	1	1	1	0	1	0
Black	0	0	0	0	0	0	0	0	0	0	0
Hispanic	1	3	3	1	0	3	1	1	0	2	3
Asian/PI	1	0	0	0	1	0	0	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	0	1	0	1	1	1	1	0	0	1	0
Total	3	6	4	2	3	5	3	2	0	4	3

Listeriosis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	1	0	0	0	1	0	0	0	0	1
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0	0	0
20-24	0	1	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	1
30-34	0	1	0	0	0	0	0	0	0	0	0
35-39	0	0	1	0	0	1	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0
45-54	2	0	1	1	1	2	0	0	0	1	0
55-64	1	2	1	1	1	1	0	0	0	1	0
65+	0	1	1	0	1	0	3	2	0	2	1
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	3	6	4	2	3	5	3	2	0	4	3



SALMONELLOSIS

Infectious Agent: *Salmonella* sp., a bacteria

Mode of Transmission: Fecal-oral route, usually via contaminated food or water

Incubation Period: 12-36 hours average (range: 6-72 hours)

Symptoms: Diarrhea, fever, headache, abdominal pain, nausea and/or vomiting

Vaccine: none

For more information: <http://www.cdc.gov/salmonella/>

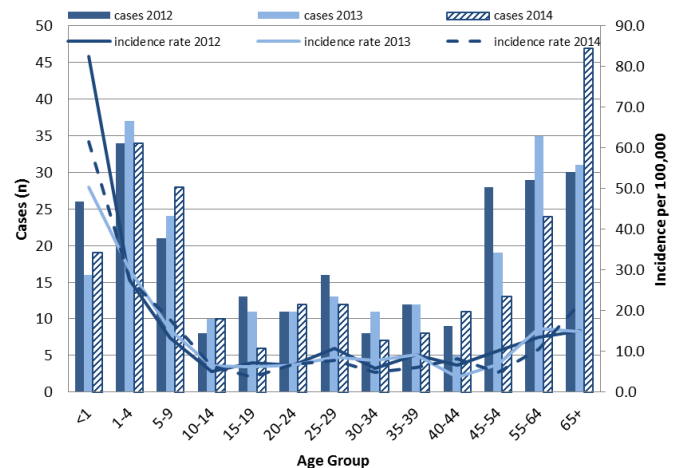
2014 REVIEW

- Incidence decreased slightly to 11.1 cases per 100,000 population, but has remained elevated since 2012 when compared to the previous 5-year average (2007-2011). Incidence in the County of San Bernardino is consistently lower than in California and the United States.
- Hispanics (38%) and Whites (35%) comprised the highest proportion of cases, as in previous years. Incidence was highest among Whites (11.3 cases per 100,000), Native Americans (10.8 cases per 100,000) and Asian/Pacific Islanders (10.6 cases per 100,000).
- Incidence was highest among those aged <1 (61.4 cases per 100,000) and 1 to 4 years of age (27.8 cases per 100,000).
- Males (45%) and females (55%) comprised approximately equal proportions of cases.
- Increased cases were reported in the time period from June-October.
- Cases in 2014 were primarily exposed to pets, including dogs & cats (35.6%); ground beef (27.9%); poultry (53.2%); eggs (35.6%); lettuce (35.2%); raw fruit (43.8%); and tomato (31.8%) during their incubation period. These trends in exposures are similar to those observed in recent years.

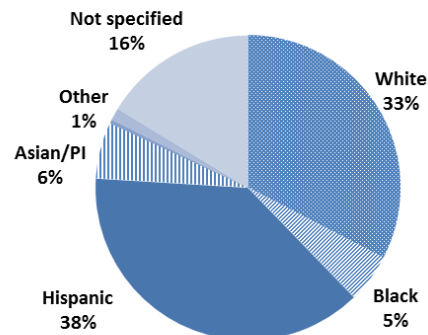
PREVENTION

- Workers in higher risk settings such as day care centers or restaurants should use good hand washing techniques with soap and water and should not work until tested and cleared by the health department.
- Wash hands with soap after handling reptiles, birds, or baby chicks, and after contact with pet feces.
- Wash kitchen work surfaces, cutting boards, and utensils with soap and water immediately after they have been in contact with raw meat or poultry.
- Thoroughly cook all poultry, ground beef, and eggs. Avoid food and drinks containing raw eggs or unpasteurized milk.
- Avoid direct and indirect contact between reptiles (turtles, iguanas, other lizards, snakes) and infants or immunocompromised persons.

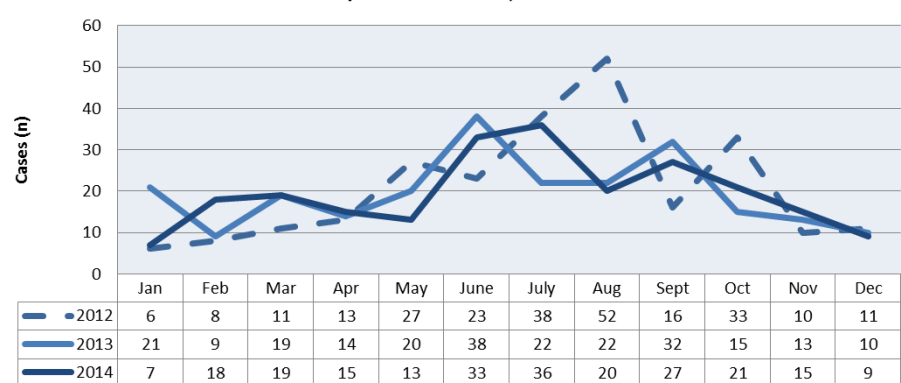
Age Distribution for Salmonellosis Cases by Count and Incidence Rate, County of San Bernardino, 2012-2014



Distribution of Race/Ethnicity Among Salmonellosis Cases, County of San Bernardino, 2014 (n=233)



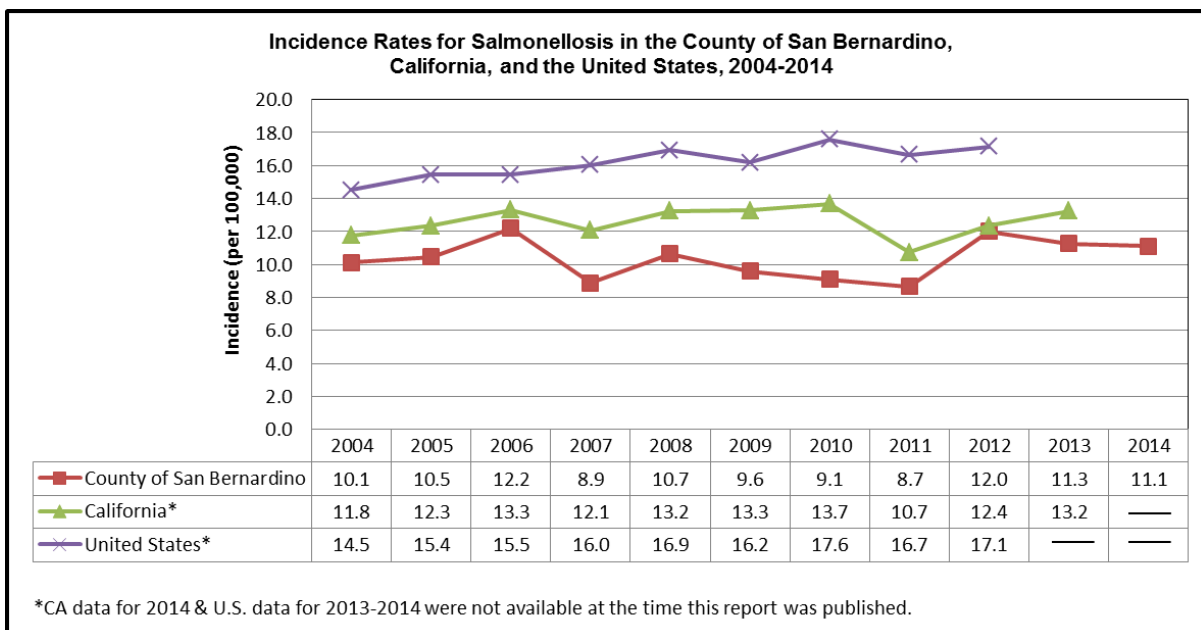
Seasonality: Incidence of Salmonellosis Cases by Month of Onset, County of San Bernardino, 2012-2014



SALMONELLOSIS

Salmonellosis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	54	63	108	66	86	49	63	72	102	82	76
Black	19	11	11	12	19	9	14	1	9	11	12
Hispanic	73	69	86	77	75	71	67	82	86	81	89
Asian/PI	9	14	7	8	5	2	10	4	10	11	14
Native Am.	0	0	2	0	0	0	2	1	0	0	1
Other	0	2	0	0	0	1	0	5	4	7	3
Not specified	38	44	27	16	34	69	42	27	37	43	38
Total	193	203	241	179	219	201	198	192	248	235	233

Salmonellosis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	28	31	25	26	24	20	11	12	26	16	19
1-4	33	34	40	30	34	45	34	34	34	37	34
5-9	21	24	31	13	24	23	19	23	21	24	28
10-14	14	13	12	13	25	14	9	11	8	10	10
15-19	7	9	18	10	7	8	10	5	13	11	6
20-24	6	11	15	3	4	7	8	9	11	11	12
25-29	15	7	10	6	16	7	10	10	16	13	12
30-34	8	8	9	4	20	5	5	9	8	11	7
35-39	6	6	9	11	12	11	9	10	12	12	8
40-44	6	11	10	7	14	9	11	9	9	5	11
45-54	18	20	23	20	10	16	27	15	28	19	13
55-64	14	10	18	17	11	13	24	17	29	35	24
65+	17	19	21	19	18	23	21	28	30	31	47
Unknown	0	0	0	0	0	0	0	0	3	0	2
Total	193	203	241	179	219	201	198	192	248	235	233



SHIGA TOXIN-PRODUCING *E. COLI* (STEC), INCLUDING *E. COLI* O157:H7

Infectious Agent: A group of shiga toxin-producing *E. coli* bacteria; mainly *E. coli* O157:H7

Mode of Transmission: Fecal-oral route, usually via food or water contaminated with ruminant feces (e.g. cow feces), or direct contact with animals or their environment

Incubation Period: 3-4 days (range: 2-10 days)

Symptoms: Diarrhea (sometimes bloody), abdominal cramps; children under 5 years and elderly people are at higher risk for hemolytic uremic syndrome (HUS), a type of kidney failure

Vaccine: None

For more information: <http://www.cdc.gov/ecoli/>

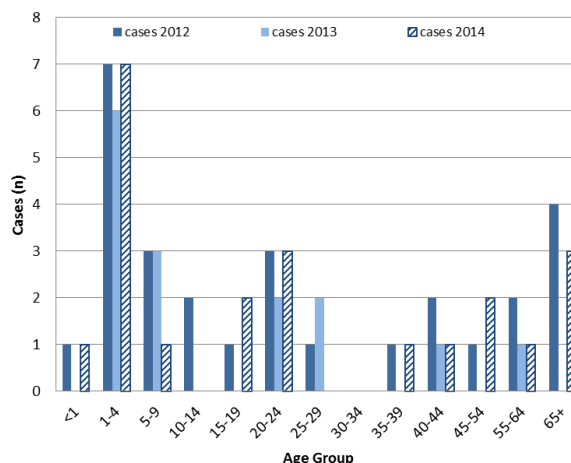
2014 REVIEW

- Incidence increased by nearly a half from 2013 to 2014 from 0.7 to 1.0 cases per 100,000 population.
- Hispanics and Whites made up equal proportions of cases: 36%. However, when examined by type of STEC, Hispanics disproportionately comprised 43% of non-O157 STEC cases, as compared with 21% of Whites. This is consistent with statewide infection data.
- The greatest number of cases occurred among children aged 1-4 years, similar to age trends observed since 2010. Incidence in this age group is 5.7 cases per 100,000. Other rates were not stable because cell counts were less than 5.
- Females comprised 59% of cases.
- STEC infections did not demonstrate consistent seasonality.
- *E. coli* O157:H7 and other non-O157 STECs comprised the majority of cases in 2014. The overall proportion of non-O157 STEC cases has increased since 2011, likely due to improved testing and reporting requirements.

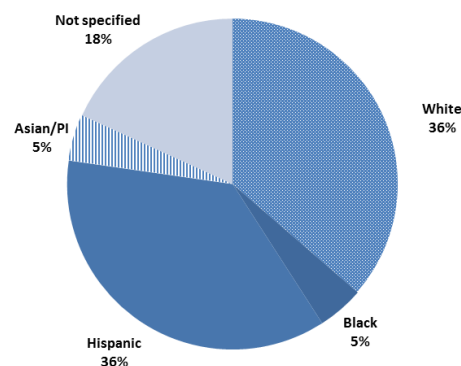
PREVENTION

- Practice good personal hygiene. This includes thorough hand washing with soap and water after using the toilet, after changing diapers, and before handling food. Infected workers in these occupations should not work until tested and cleared by the health department.
- Cook meats thoroughly. Ground beef and meat that has been needle-tenderized should be cooked to a temperature of at least 160°F/70°C. Use a thermometer to verify the temperature. Color is not a very reliable indicator of how thoroughly meat has been cooked.
- Avoid consuming raw milk, unpasteurized dairy products, and unpasteurized juices (like fresh apple cider).
- Avoid swallowing water when swimming or playing in lakes, ponds, streams, swimming pools, and backyard "kiddie" pools.
- Prevent cross-contamination in food preparation areas by thoroughly washing hands, counters, cutting boards, and utensils after they touch raw meat.
- Wash your hands after contact with animals or their environments (at farms, petting zoos, fairs, even your own backyard). Use an alcohol-based hand sanitizer if soap & water are not available. However, hand sanitizers are not a substitute for washing with soap & water.

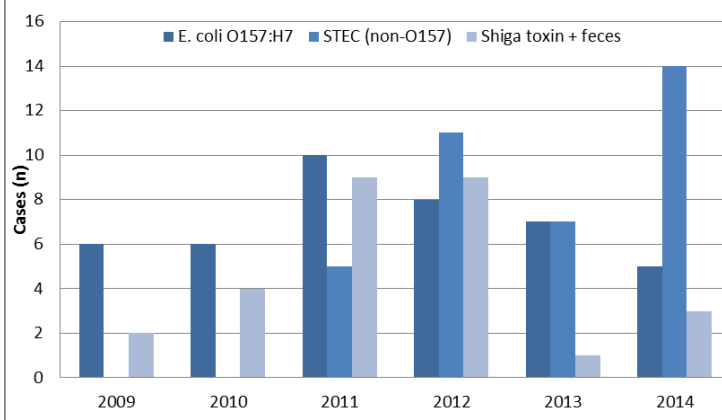
Age Distribution of STEC Cases by Count, County of San Bernardino, 2012-2014



Distribution of Race/Ethnicity Among STEC Cases, County of San Bernardino, 2014 (n=22)



STEC Cases by Known Etiology, County of San Bernardino, 2009-2014

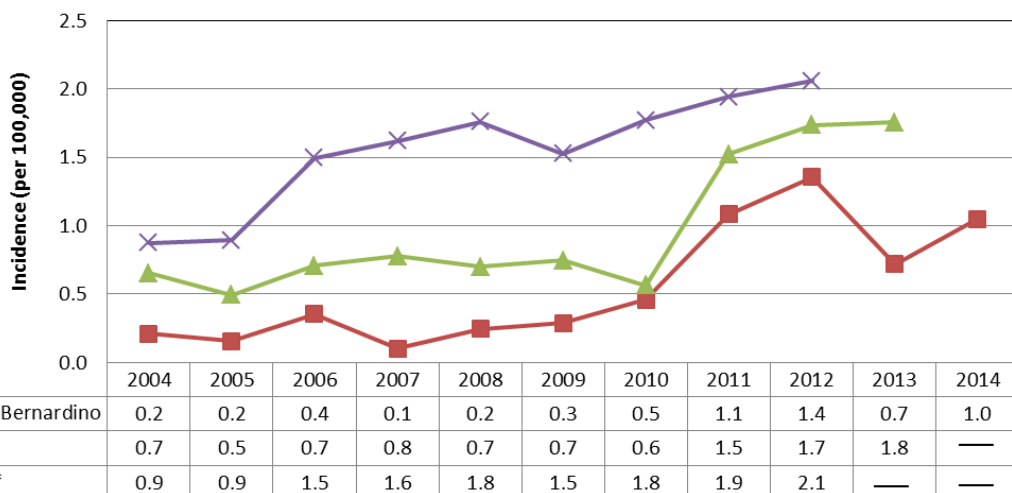


SHIGA TOXIN-PRODUCING *E. COLI* (STEC), INCLUDING *E. COLI* O157:H7

Shiga Toxin-producing <i>E. coli</i> (STEC) Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	3	1	2	0	1	2	3	10	12	5	8
Black	0	0	2	1	1	0	0	1	0	0	1
Hispanic	0	1	3	1	2	2	3	10	13	8	8
Asian/PI	1	0	0	0	0	0	0	1	0	0	1
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	1	0
Not specified	0	1	0	0	1	2	4	2	3	1	4
Total	4	3	7	2	5	6	10	24	28	15	22

Shiga Toxin-producing <i>E. coli</i> (STEC) Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	1	1	0	1
1-4	1	1	4	2	1	1	2	12	7	6	7
5-9	0	0	0	0	1	3	3	0	3	3	1
10-14	1	0	1	0	0	0	0	1	2	0	0
15-19	1	1	0	0	1	1	0	0	1	0	2
20-24	0	0	0	0	1	0	1	2	3	2	3
25-29	0	0	1	0	0	0	0	2	1	2	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	1	0	0	1	0	0	0	1	0	1
40-44	0	0	0	0	0	0	0	0	2	1	1
45-54	0	0	0	0	0	0	1	3	1	0	2
55-64	0	0	1	0	0	1	1	2	2	1	1
65+	1	0	0	0	0	0	2	1	4	0	3
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	4	3	7	2	5	6	10	24	28	15	22

Incidence Rates for STEC Cases in the County of San Bernardino, California, and the United States, 2004-2014



*CA data for 2014 & U.S. data for 2013-2014 were not available at the time this report was published. Beginning in 2011, CA rate shows incidence rate for all STEC infections, including *E. coli* O157 infections.

SHIGELLOSIS

Infectious Agent: *Shigella* sp., a group of four species of bacteria: Group A (*Shigella dysenteriae*), Group B (*Shigella flexneri*), Group C (*Shigella boydii*), Group D (*Shigella sonnei*)

Mode of Transmission: Fecal-oral route, usually via contaminated food or water

Incubation Period: 1-3 days average (range: 12-96 hours, or up to one week for *S. dysenteriae*)

Symptoms: Diarrhea (sometimes bloody), fever, nausea and/or vomiting

Vaccine: none

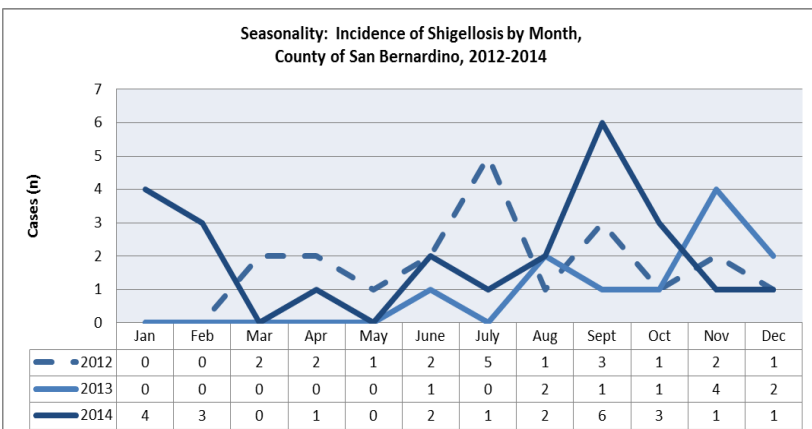
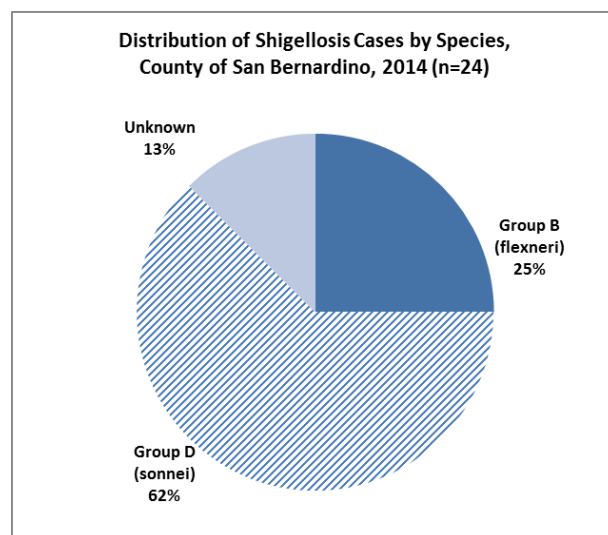
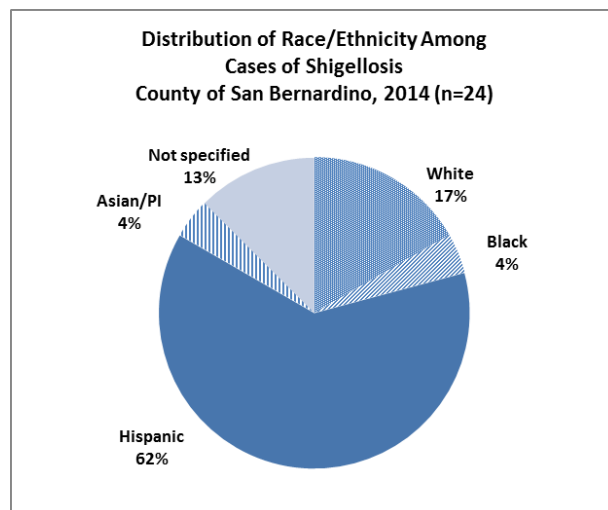
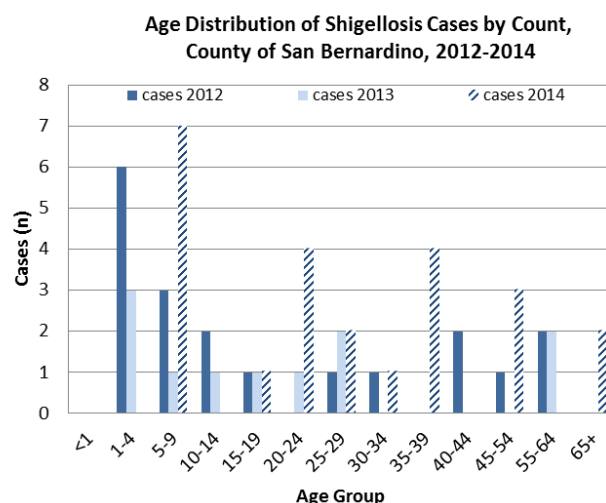
For more information: <http://www.cdc.gov/shigella/index.html>

2014 REVIEW

- Incidence more than doubled in 2014 to 1.1 cases per 100,000 compared to 2013. Since 2003, incidence has decreased and remained below California and U.S. rates.
- The largest proportion of cases occurred among Hispanics (62%). Incidence was also highest among Hispanics at 4.4 cases per 100,000. Other rates were not stable as cell counts were less than 5.
- Among children aged 5-9 years, incidence increased about three times from 2013 to 2014 to 1.4 cases per 100,000. Other rates were not stable as cell counts were less than 5.
- Males (46%) and females (54%) comprised almost equal proportions of cases.
- Shigellosis did not demonstrate consistent seasonality, as observed in tropical climates.
- More than half of cases (62%) were identified as Group D (*Shigella sonnei*) and 25% (n=3) as Group B (*Shigella flexneri*), comparable to proportions observed in past years.

PREVENTION

- Everyone, especially workers in higher risk settings such as day care centers or restaurants, should use good hand washing techniques with soap and water. Workers in sensitive occupations should not work until tested and cleared by the health department.
- Avoid food that may have been washed in contaminated water and or handled by vendors without adequate hand washing facilities.
- When traveling to areas without adequate sewage treatment, drink only treated or boiled water.

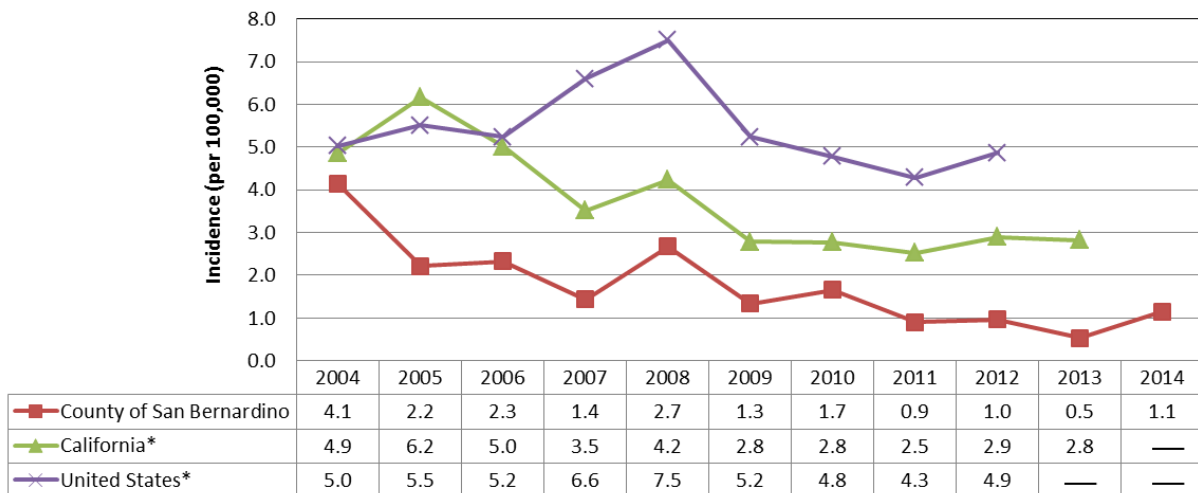


SHIGELLOSIS

Shigellosis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	26	9	10	5	15	7	8	3	3	2	4
Black	4	1	2	0	2	0	2	2	1	1	1
Hispanic	34	26	29	21	32	7	20	11	13	5	15
Asian/PI	0	1	1	1	0	2	2	0	1	0	1
Native Am.	0	1	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	1	0	0	0
Not specified	15	5	4	2	6	12	4	3	2	3	3
Total	79	43	46	29	55	28	36	20	20	11	24

Shigellosis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	1	0	0	2	0	2	0	0	0	0
1-4	21	10	14	10	17	9	14	7	6	3	0
5-9	15	8	10	3	6	3	9	1	3	1	7
10-14	5	4	3	5	4	3	0	0	2	1	0
15-19	5	5	2	0	0	1	0	0	1	1	1
20-24	5	3	3	0	2	3	0	1	0	1	4
25-29	7	4	1	2	6	1	3	1	1	2	2
30-34	6	2	4	1	2	1	3	3	1	0	1
35-39	3	0	1	2	3	0	1	0	0	0	4
40-44	4	1	1	0	3	0	1	3	2	0	0
45-54	2	1	3	2	5	4	1	2	1	0	3
55-64	2	2	3	3	2	2	0	1	2	2	0
65+	4	2	1	1	3	1	2	1	0	0	2
Unknown	0	0	0	0	0	0	0	0	1	0	0
Total	79	43	46	29	55	28	36	20	20	11	24

Incidence Rates for Shigellosis in the County of San Bernardino, California, and the United States, 2004-2014



*CA data for 2014 & U.S. data for 2013-2014 were not available at the time this report was published.

HIV/AIDS

Infectious Agent: Human Immunodeficiency Virus (HIV)
Mode of Transmission: Contact with infected body fluids containing blood, blood products; amniotic fluid; semen and vaginal secretions
Incubation Period: 2 weeks to 6 months for HIV infection; 1 to 15 years to develop AIDS
Symptoms: fever, chills, night sweats, rashes for HIV
Vaccine: none
For more information: <http://www.cdc.gov/hiv/>

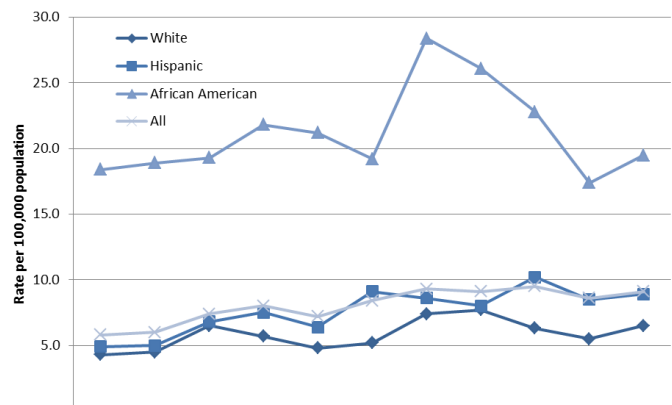
2014 REVIEW

- Reports of new diagnoses of HIV infections, regardless of stage, remained level from 2012-2014.
- While there are several qualifying conditions, the most common way people progress from HIV to AIDS is having a CD4 count drop below 200.
- New diagnoses of AIDS continue to trend downward each year due to advances in treatment.
- The number of persons living with HIV/AIDS in this county increased 4.9% in 2014 to 3,753.
- The actual number of people living with HIV/AIDS is even higher as an estimated 16% of infected people are unaware of their status and the numbers do not include those individuals who have moved into this county to receive care.
- Of the new HIV diagnoses reported each year, 31% develop AIDS in the same or following year indicating their first HIV diagnosis came after years of positivity.
- By race/ethnicity, African Americans make up 8% of the county population but account for 18% of HIV cases diagnosed in 2014 and 24% of people living with HIV.

PREVENTION

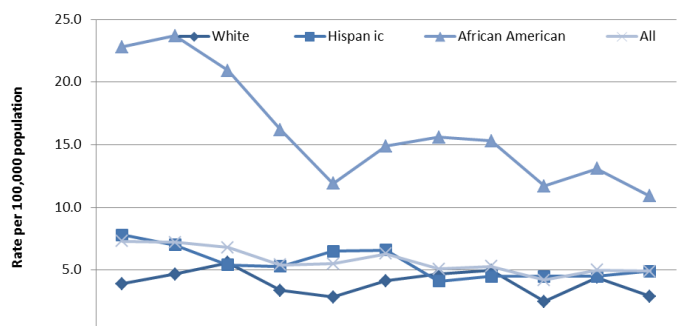
- Condoms used consistently and correctly may prevent infection. Avoid sharing needles or razors.
- All individuals aged 13- 64 should be tested at least once, then annually if high risk. Gay and bisexual males (MSM) should be screened every 3-6 months depending on risk. All pregnant women should be screened at their first prenatal visit.
- Linking HIV positive individuals with a medical provider and starting them on antiretroviral treatment has been shown to decrease their viral load and increase their CD4 count.
- All partners of HIV positive individuals within the last 12 months or more depending on the type of partner, should be notified of their exposure and tested. The public health department is available to assist with this confidential service.
- HIV negative individuals at ongoing risk of HIV infection, including those in discordant relationships or MSM with multiple partners, should consider HIV pre-exposure prophylaxis (PrEP), where they take Truvada daily to avoid HIV infection.

HIV Incidence Rates by Race/Ethnicity, County of San Bernardino, 2004-2014



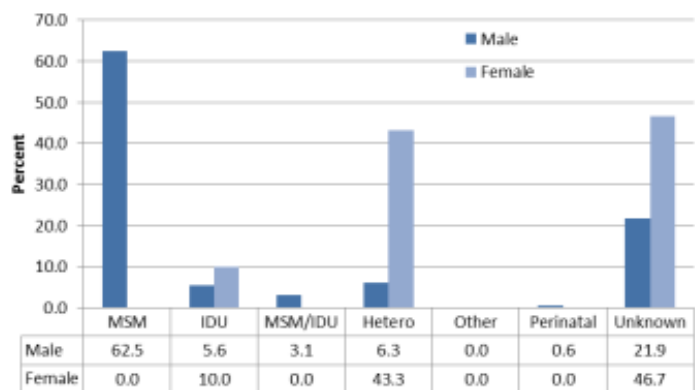
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	4.3	4.5	6.5	5.7	4.8	5.2	7.4	7.7	6.3	5.5	6.5
Hispanic	4.9	5.0	6.8	7.5	6.4	9.1	8.6	8.0	10.2	8.5	8.9
African American	18.4	18.9	19.3	21.8	21.2	19.2	28.4	26.1	22.8	17.4	19.5
All	5.8	6.0	7.4	8.0	7.2	8.4	9.3	9.1	9.5	8.6	9.1

AIDS Incidence Rates by Race/Ethnicity, County of San Bernardino, 2004-2014

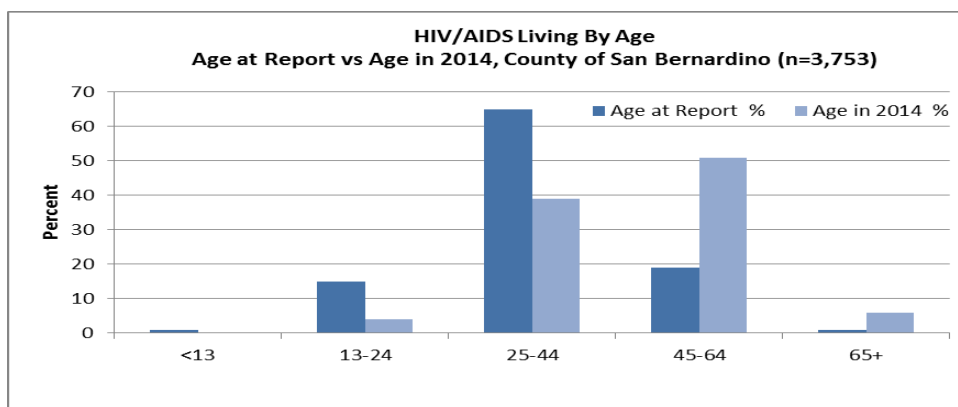


	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	3.9	4.7	5.6	3.4	2.9	4.2	4.7	5.0	2.5	4.4	2.9
Hispanic	7.8	7.0	5.4	5.3	6.5	6.6	4.1	4.5	4.5	4.5	4.9
African American	22.8	23.7	20.9	16.2	11.9	14.9	15.6	15.3	11.7	13.1	10.9
All	7.3	7.2	6.8	5.4	5.5	6.3	5.1	5.3	4.2	5.0	4.9

HIV Cases by Gender and Risk %
2014 (n=190)



HIV/AIDS



HIV/AIDS Incidence Surveillance, County of San Bernardino, 2012-2014						
	HIV (3)			AIDS		
	2012	2013	2014	2012	2013	2014
Incidence	196	189	190	118	96	102
Rate per 100,000 (2)	9.5	9.1	9.1	5.7	4.6	4.9
Risk						
MSM	115	119	100	73	60	52
IDU	17	9	12	10	9	8
MSM/IDU	7	5	5	6	4	6
Hetero	25	29	23	14	17	16
Other	1	0	0	0	0	0
Perinatal	0	0	1	0	0	0
Unknown	31	27	49	15	6	20
Gender						
Males	163	167	160	102	85	88
Females	33	22	30	16	11	14
Race/Ethnicity						
White	39	44	44	23	25	20
Black	44	37	34	37	20	19
Hispanic	105	97	95	56	46	52
Asian	5	9	9	1	2	5
American	1	0	3	0	0	1
Multi race	2	1	5	1	3	4
Unknown	0	1	0	0	0	1
Age Group (Age at Diagnosis)						
<13	1	0	1	0	0	0
13-24	46	45	44	11	8	6
25-44	97	102	110	62	47	54
45-64	45	40	33	43	38	40
65+	7	2	2	2	3	2
Unknown	0	0	0	0	0	0

Source: CA Office of AIDS eHARS Download 04/8/2015.

(1) Due to delays in reporting, 2014 data may not be complete.

(2) State of California, Department of Finance, E-6. Population Estimates and Components of Change

By County- July 1, 2010-2013. December 2014.

(3) HIV numbers include all persons diagnosed with HIV in a given year regardless of their AIDS status.

CHLAMYDIA

Infectious Agent: *Chlamydia trachomatis* (CT)

Mode of Transmission: Sexual activity or from mother to infant during birth

Incubation Period: 7-14 days or longer

Symptoms: if present, vaginal, penile or rectal discharge, itching, or burning on urination

Vaccine: none

Complications: untreated CT can cause pelvic inflammatory disease (PID), ectopic pregnancy, and infertility in women and preterm delivery and pneumonia in infants born to infected women

For more information:

<http://www.cdc.gov/std/chlamydia/default.htm>

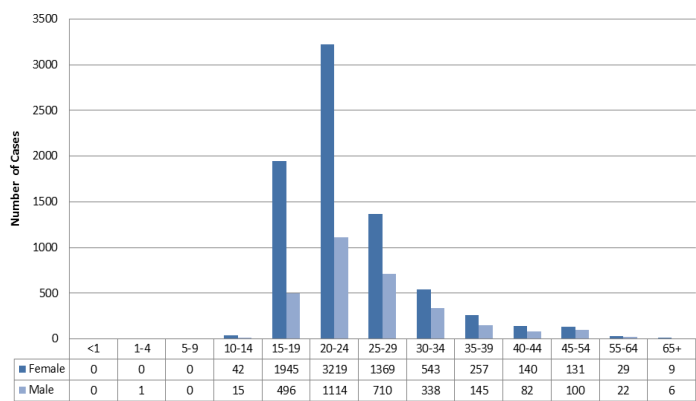
2014 REVIEW

- The numbers of reported CT cases have increased 24% in this county since 2009 with the largest increase (27%) among females. However from 2013 to 2014, the number of cases decreased 2% indicating the number of cases reported yearly may be stabilizing.
- In 2013 San Bernardino County ranked 14th among all counties in the U.S. for number of CT cases.
- The upward trends in numbers of cases may be due to increased screening of asymptomatic cases, the use of more sensitive tests, better reporting or a true increase in morbidity.
- Females 15-29 years of age account for 61% of all county cases in 2014.
- Among 2014 county cases, African American females have rates of infection five times that of Hispanic females and eight times that of White females.
- Up to 90% of men and 70% of women may be asymptomatic. The Centers for Disease Control and Prevention (CDC) estimates the actual number of infections is double that reported.
- NHANES, a large national study, estimated 4.7% of all sexually active women ages 14-24 years were infected with CT in 2012. The overall estimated prevalence of infection among both genders was 1.7%.
- Young persons are at increased risk of infection because of cervical changes, power imbalances in relationships with older partners, a tendency to have serial short term relationships sometimes with multiple partners and an inability to judge risk.

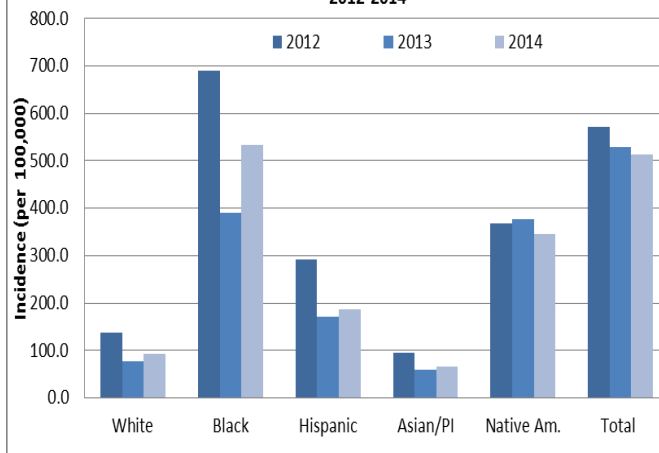
PREVENTION

- The best prevention is regular screening of women 25 years and younger, pregnant women, or any individual at increased risk; use of a barrier contraception method; or abstinence from sexual intercourse.
- Optimal specimens for CT testing are vaginal swabs (self collected is acceptable) for women and first catch urine specimens for men.
- Men and women who have tested positive for CT should be retested after 3 months due to high rates of reinfection.
- Individuals with CT should avoid having sex until 7 days after beginning their antibiotics. Any partners within the previous 60 days should also be tested and treated for CT.

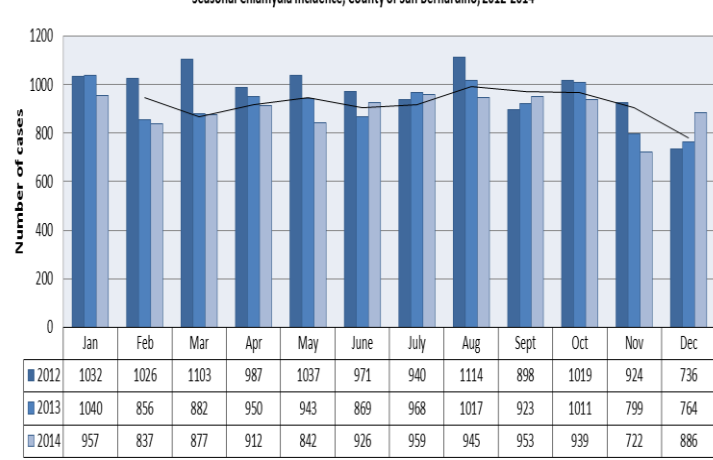
Chlamydia Cases By Age and Gender, County of San Bernardino, 2014 (N=10,713)



Incidence of Chlamydia by Race/Ethnicity, 2012-2014



Seasonal Chlamydia Incidence, County of San Bernardino, 2012-2014

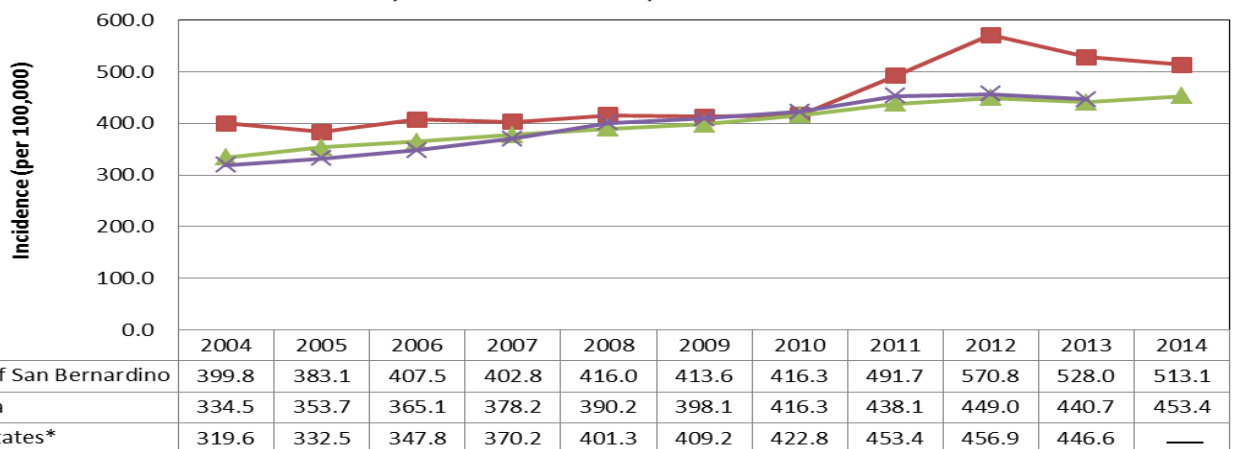


CHLAMYDIA

Chlamydia Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	963	863	758	607	608	639	595	267	939	535	634
Black	1122	1206	1041	736	1016	1087	749	391	1241	719	928
Hispanic	1784	1988	1842	1743	1640	1842	1326	1486	2978	1764	1981
Asian	137	119	95	90	92	116	74	25	122	75	86
Native Am.	6	14	15	9	8	15	15	6	32	33	32
Other	0	3	4	0	0	0	1	34	134	178	259
Not specified	3606	3248	4309	4937	5184	4955	5726	8693	6341	7718	6835
Total	7618	7441	8064	8122	8548	8654	8486	10902	11787	11022	10755

Chlamydia Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	6	3	10	9	2	0	4	7	4	1	0
1-4	0	1	0	1	0	0	0	0	0	0	1
5-9	0	1	2	2	0	0	0	5	2	0	0
10-14	109	77	75	67	69	70	74	56	99	82	58
15-19	2566	2505	2668	2698	2809	2763	2532	2773	3215	2858	2445
20-24	2883	2816	3059	3045	3197	3309	3400	4663	4834	4503	4336
25-29	1136	1097	1194	1341	1341	1370	1391	1865	1984	1927	2082
30-34	493	467	522	501	572	583	547	746	828	801	883
35-39	220	244	281	234	303	282	287	375	398	414	403
40-44	110	118	118	110	140	146	135	197	199	203	222
45-54	75	93	97	85	98	99	93	173	171	177	231
55-64	14	15	24	23	14	22	18	30	40	42	51
65+	6	4	14	6	3	10	5	9	12	10	15
Unknown	0	0	0	0	0	0	0	3	1	4	28
Total	7618	7441	8064	8122	8548	8654	8486	10902	11787	11022	10755

Incidence Rates for Chlamydia in the County of San Bernardino, California, and the United States, 2004-2014



*U.S. data for 2014 was not available at the time this report was published.

GONORRHEA

Infectious Agent: *Neisseria gonorrhoeae* (GC)

Mode of Transmission: Sexual activity or from mother to child at birth

Incubation Period: 1-14 days

Symptoms: Urethral discharge, itching, burning

Vaccine: None

Complications: Untreated GC can cause pelvic inflammatory disease (PID), ectopic pregnancy, and infertility in women and blindness, joint infection and disseminated blood infection in infants born to infected women

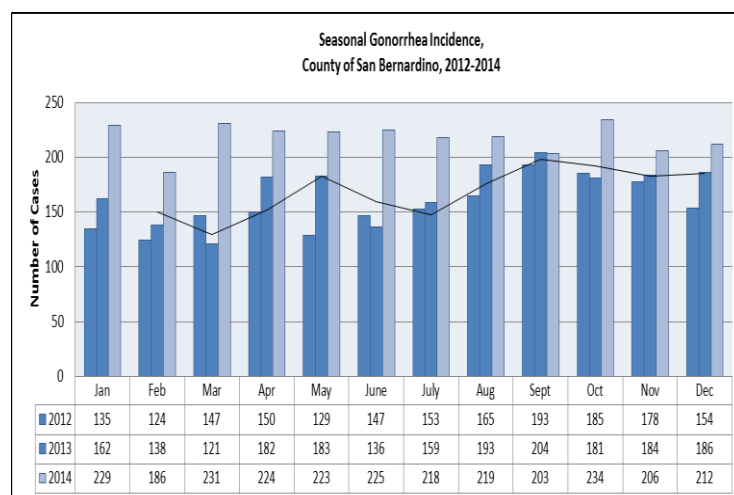
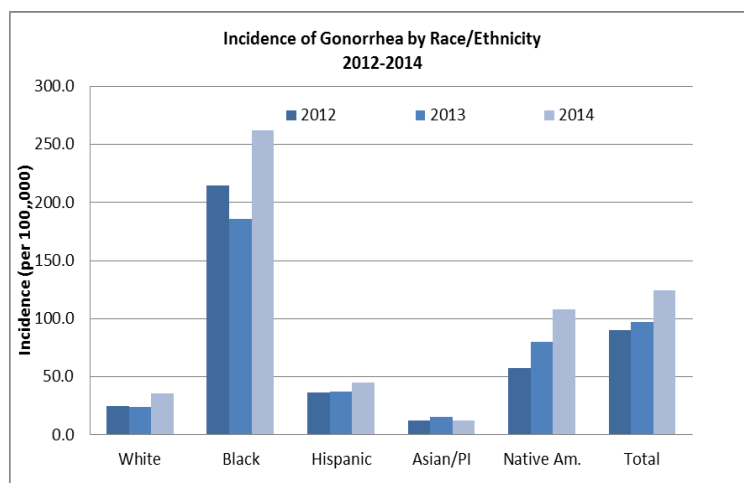
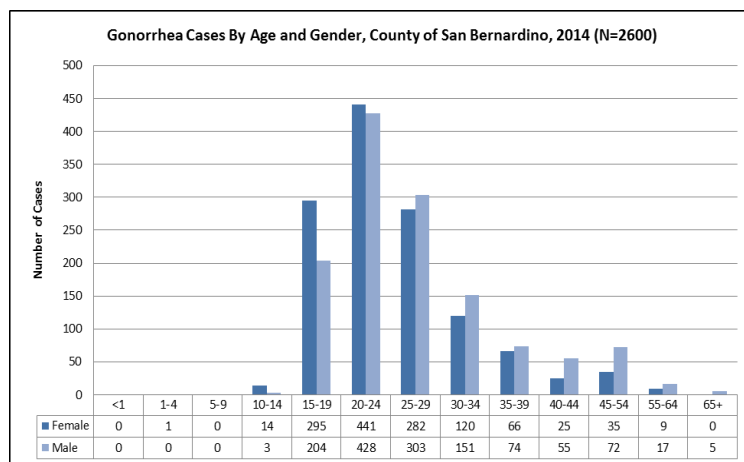
For more information: <http://www.cdc.gov/std/Gonorrhea/>

2014 REVIEW

- Gonorrhea cases increased 124% in the county from 2009 (1,163 cases) to 2014 (2,610 cases).
- In 2013 San Bernardino County ranked 36th among all counties in the U.S. for number of GC cases.
- The increase in cases is attributed to increased testing of extragenital sites, increases in number of symptomatic patients and increased infections among MSM.
- In 2014 males comprised 50% of county cases with individuals aged 15-29 years of any gender accounting for 75% of cases.
- In 2014 African Americans had rates of infection (262.1) five times that of Hispanics (45.2) and seven times that of Whites (35.6).
- Of 2012 CA cases, 57.6% of cases in males were among MSM. Of these cases, 21.6% were also HIV positive at the time their GC infection was diagnosed.
- MSM cases were also more likely to use the internet to meet sex partners, have anonymous partners and use methamphetamines and poppers than heterosexual cases.
- Having an STI increases an individual's risk of acquiring HIV because of the presence of sores and other inflammatory processes.
- Of the county cases for which treatment information was available, 25% were inadequately treated or not treated at all.
- CA data on antibiotic resistance shows that the number of isolates with CDC-defined alerts to any cephalosporin decreased from 6.5% in 2012 to 1.4% in 2013. The proportion of isolates with alert values to cefixime increased from 0% to 1.3%.

PREVENTION

- Use latex condoms consistently and correctly if not in a mutually monogamous relationship. Be aware that drugs and alcohol may increase risky behavior.
- Annual screening and prompt effective treatment is important among sexually active individuals. The most recent treatment guidelines issued in 2015 recommend dual therapy with two antibiotics for treatment, ceftriaxone and azithromycin, to limit resistance in oral cephalosporins. Doxycycline is no longer recommended.
- All partners of a GC-infected individual within the 60 days prior to diagnosis should be tested and treated.

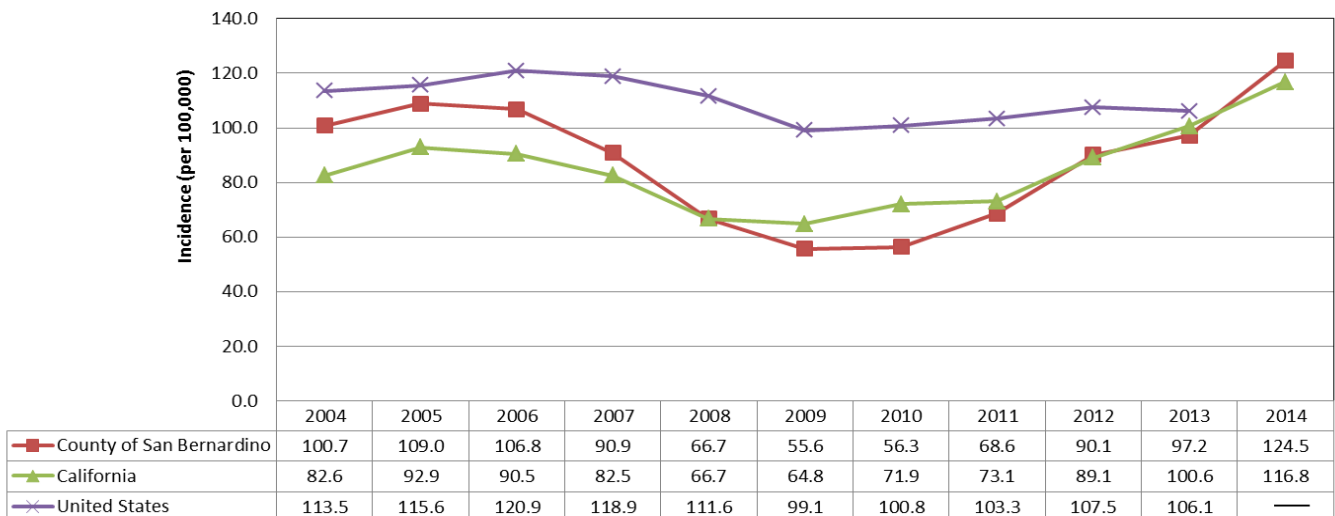


GONORRHEA

Gonorrhea Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	221	258	212	149	119	76	83	73	171	168	240
Black	480	574	435	287	299	273	231	190	387	342	456
Hispanic	364	391	360	276	198	152	150	149	368	381	479
Asian	22	22	11	15	17	17	14	5	16	20	16
Native Am.	1	6	4	2	4	0	1	1	5	7	10
Other	0	1	1	0	0	0	0	11	29	40	71
Not specified	831	864	1091	1103	733	645	669	979	884	1071	1338
Total	1919	2116	2114	1832	1370	1163	1148	1408	1860	2029	2610

Gonorrhea Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	2	1	2	0	0	3	2	0	0	0
1-4	1	0	2	0	0	0	0	0	0	0	1
5-9	0	0	4	0	0	0	0	0	0	0	0
10-14	19	30	17	15	10	9	8	8	13	8	17
15-19	453	530	563	499	459	349	267	310	396	398	499
20-24	620	681	692	613	429	387	429	505	666	677	871
25-29	330	384	361	319	215	204	195	268	334	385	585
30-34	215	212	195	161	118	86	102	146	198	226	273
35-39	110	120	140	102	61	47	55	66	114	130	140
40-44	77	83	66	51	41	32	44	58	58	93	80
45-54	71	54	58	57	33	40	41	37	59	91	108
55-64	19	13	13	11	3	9	2	6	14	18	26
65+	4	7	2	2	1	0	2	2	8	2	5
Unknown	0	0	0	0	0	0	0	0	0	1	5
Total	1919	2116	2114	1832	1370	1163	1148	1408	1860	2029	2610

Incidence Rates for Gonorrhea in the County of San Bernardino, California, and the United States, 2004-2014



*U.S. data for 2014 was not available at the time this report was published.

SYPHILIS, ALL STAGES

Infectious Agent: *Treponema pallidum*

Mode of Transmission: Contact with syphilis chancre on the genitalia, anus, or mouth, or during pregnancy or birth

Incubation Period: 21 days (range:10-90 days)

Symptoms: Chancre, rash including palms and soles of feet, fever, swollen lymph glands, sore throat, hair loss, muscle aches and fatigue

Vaccine: none

For more information:

<http://www.cdc.gov/std/syphilis/default.htm>

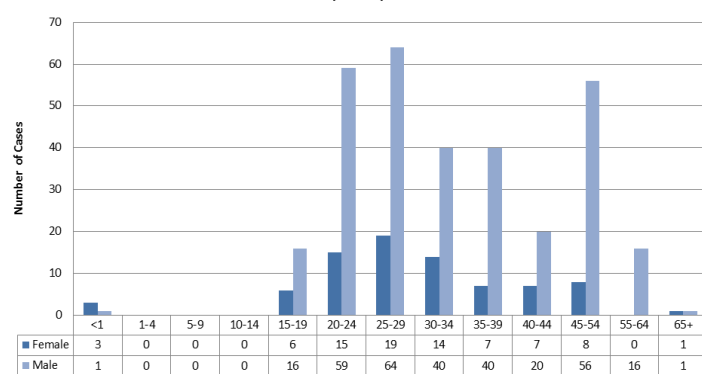
2014 REVIEW

- The numbers of cases of all stages in the county increased by 96% from 2009 to 2013, with the largest increases occurring among the infectious stages (primary, secondary, and early latent).
- In 2014 San Bernardino County, with 2.1 million residents, reported more syphilis cases than did 23 states.
- In addition to the overall number of syphilis cases increasing in the county, the proportion of early infectious cases has increased from 30% in 2009 to 46% in 2014.
- Rates in African Americans are three times that of Whites and almost double that of Hispanics in the county.
- Of the 393 cases of any stage reported in 2014, 80% were in males.
- The numbers of cases among county females has trended up from 2009 (54), 2010 (45), 2011 (57), 2012 (62), 2013 (77) and 2014 (80).
- Increases in congenital (infant) syphilis cases follow increases in female cases by one to two years. Four congenital syphilis cases were reported in the county in each of 2013 and 2014, underscoring the importance of screening and follow up in pregnant women.
- Cases of congenital syphilis increased in CA from 56 in 2013 to 100 in 2014.
- In 2014 CA (including this county) and several other states reported increases in ocular syphilis, a neurological manifestation. Many of the cases were in HIV positive MSM.

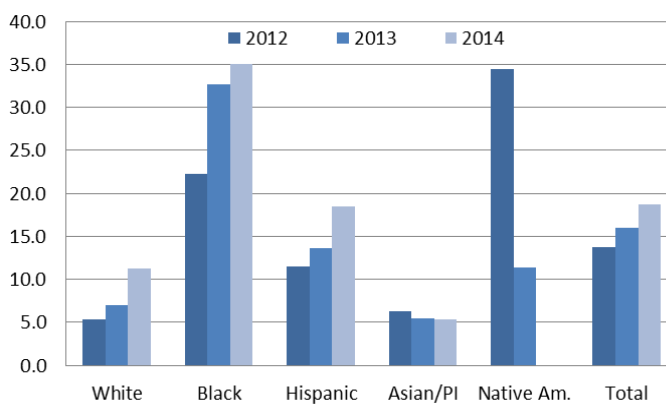
PREVENTION

- Condoms, if used correctly and consistently, may prevent infection. Alcohol and drugs may increase risk of infection with syphilis and other STIs.
- Pregnant women should be screened at their first prenatal visit. Congenital syphilis cases can be prevented if women are treated appropriately at least 30 days before the birth.
- High risk individuals (MSM, HIV-infected, those with multiple sex partners) should be screened annually or as often as every 3-6 months.
- Penicillin is effective in the treatment of syphilis, one injection for the earliest stages and three injections for the stages over one year of duration. Treatment will not undo any of the damage already done.
- HIV testing is recommended also, given a high number of co-infected cases especially among MSM.

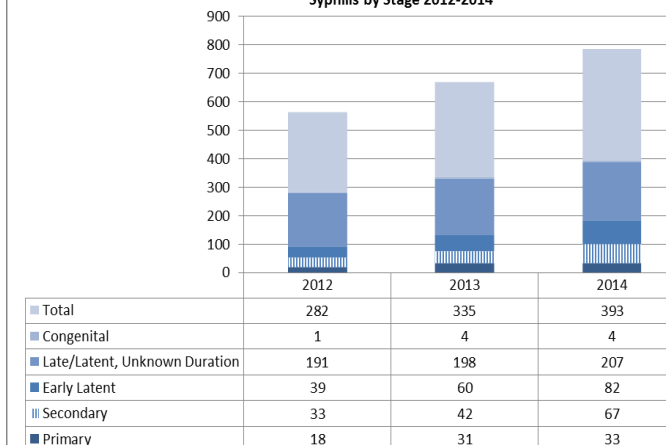
Syphilis Cases (All Stages) By Age and Gender, County of San Bernardino, 2014 (N=393)



Incidence of Syphilis (All Stages) by Race/Ethnicity, 2012-2014



San Bernardino County
Syphilis by Stage 2012-2014

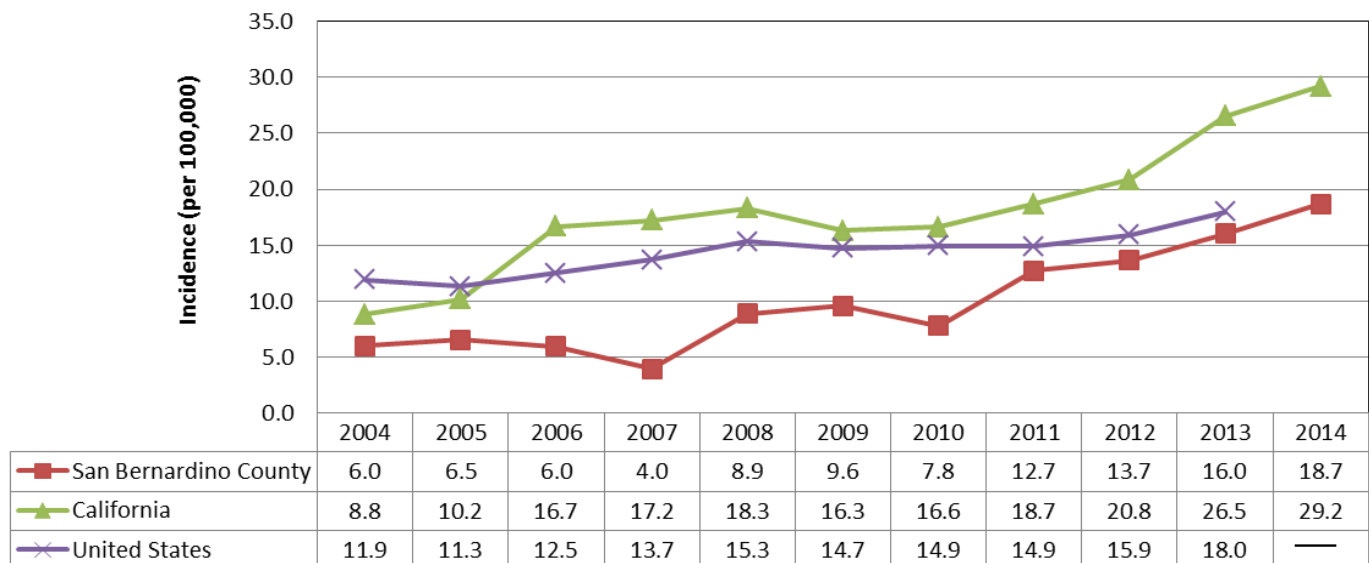


SYPHILIS, ALL STAGES

Syphilis (All Stages) Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	14	20	13	8	16	31	19	33	37	48	76
Black	17	16	28	17	21	26	23	29	40	60	61
Hispanic	57	60	60	32	85	87	75	126	117	141	196
Asian	1	7	1	1	6	5	1	6	8	7	7
Native Am.	0	0	0	0	0	1	0	0	3	1	0
Other	0	1	1	0	0	0	0	5	2	3	11
Not specified	25	23	15	22	54	51	41	61	75	75	42
Total	114	127	118	80	182	201	159	260	282	335	393

Syphilis (All Stages) Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	1	3	0	0	3	1	0	0	1	4	4
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	1	0	1	0	0	0	0	0	0	0	0
15-19	1	11	4	2	9	16	9	19	20	21	22
20-24	7	9	7	9	22	37	43	72	71	84	74
25-29	17	18	15	6	28	31	25	52	50	82	83
30-34	14	16	13	3	13	19	19	31	26	40	54
35-39	26	19	15	9	24	25	13	20	24	26	47
40-44	12	17	23	13	33	24	17	17	23	20	27
45-54	19	15	25	19	29	38	23	35	45	41	61
55-64	6	10	12	10	7	9	5	7	16	14	19
65+	10	9	3	9	14	1	5	7	6	3	2
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	114	127	118	80	182	201	159	260	282	335	393

Incidence Rates for Syphilis (All Stages) in the County of San Bernardino, California, and the United States, 2004-2014



*U.S. data for 2014 was not available at the time this report was published.

PRIMARY/SECONDARY SYPHILIS

Infectious Agent: *Treponema pallidum*

Mode of Transmission: Contact with syphilis chancre on the genitalia, anus, or mouth, or during pregnancy or birth

Incubation Period: 21 days (range: 10-90 days)

Symptoms: Chancre, rash including palms and soles of feet, fever, swollen lymph glands, sore throat, hair loss, muscle aches and fatigue

Vaccine: None

For more information:

<http://www.cdc.gov/std/syphilis/default.htm>

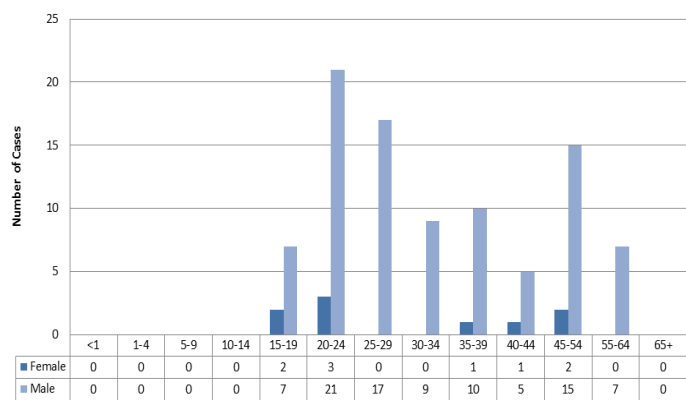
2014 REVIEW

- The number of primary and secondary (PS) stage syphilis cases, the most infectious stages, increased 194% in the county from 2009-2014.
- In 2013, 17,535 cases of PS syphilis were reported in the U.S., an increase of over 10.9% from 2012.
- In San Bernardino County, 90% of cases are males and almost half of the cases are in the 20-29 year age group.
- In 2014 among county cases, African Americans had rates two times that of Hispanics and Whites.
- In CA African American and Hispanic cases tended to be younger while Whites tended to be older.
- In 2013 in CA MSM account for 83% of cases among men. The rate of syphilis among MSM has been estimated to be 393.7/100,000, 170 times that of heterosexual men and 350 times that of females.
- Of CA cases, 45% of cases among MSM self reported as HIV positive at the time of their syphilis diagnosis.
- The increase in syphilis among MSM is due to use of the internet to meet partners, having large numbers of anonymous partners and methamphetamine use.
- The presence of a syphilis chancre increases the risk of acquiring HIV by 2-5 times if exposed. As the chancre may be hidden in the vagina, rectum or mouth, serology may be the only way to detect infection.

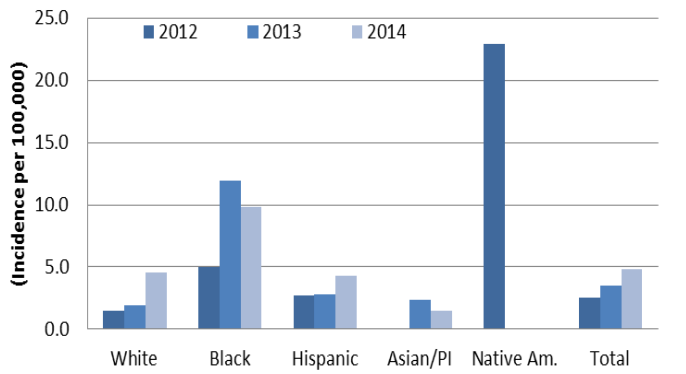
PREVENTION

- Condoms if used correctly and consistently may prevent infection.
- Pregnant women should be screened at their first prenatal visit or more often if at increased risk.
- High risk individuals (HIV-infected, MSM, those with multiple sex partners) should be screened annually or as often as every 3-6 months for both syphilis and HIV if negative.
- PS syphilis is easily treated with one penicillin injection, however it will not fix any damage already done.
- Individuals diagnosed with PS syphilis should abstain from sex until after treatment and the chancre has healed (if visible).
- Individuals with sexually transmitted diseases such as PS syphilis are also at increased risk of HIV and may benefit from an HIV pre-exposure (PrEP) regimen such as Truvada.

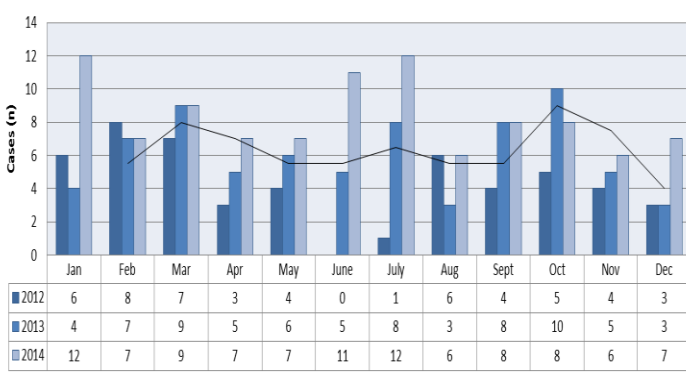
Primary and Secondary Syphilis Cases By Age and Gender, County of San Bernardino, 2014 (N=100)



Incidence of P&S Syphilis by Race/Ethnicity, 2012-2014



Seasonal Syphilis (Primary & Secondary) Incidence, County of San Bernardino, 2012-2014



PRIMARY/SECONDARY SYPHILIS

Syphilis (Primary & Secondary) Cases by Race/Ethnicity

County of San Bernardino, 2004-2014

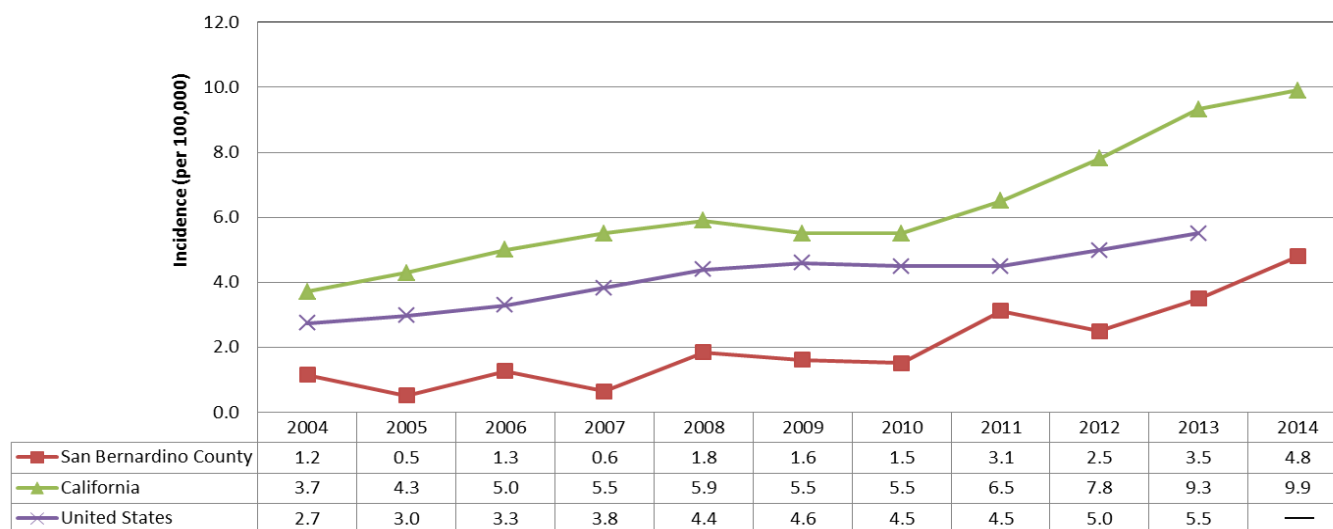
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	12	2	5	0	10	8	5	11	10	13	31
Black	4	3	6	3	3	3	7	6	9	22	17
Hispanic	2	4	10	8	18	17	15	33	28	29	46
Asian	2	0	1	0	0	3	0	1	0	3	2
Native Am.	0	0	0	0	0	0	0	0	2	0	0
Other/Multiple	0	1	0	0	0	0	0	3	0	0	2
Not specified	2	0	3	2	7	3	4	10	2	6	2
Total	22	10	25	13	38	34	31	64	51	73	100

Syphilis (Primary & Secondary) Cases by Age

County of San Bernardino, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	1	0	4	4	1	7	6	9	9
20-24	2	3	2	2	6	9	11	25	14	19	24
25-29	1	4	3	1	11	8	6	14	9	20	17
30-34	4	1	1	2	1	3	2	4	6	10	9
35-39	5	1	5	3	5	3	5	4	1	4	11
40-44	4	0	4	5	3	1	1	3	6	2	6
45-54	6	1	5	0	5	6	5	5	7	4	17
55-64	0	0	4	0	2	0	0	1	2	4	7
65+	0	0	0	0	1	0	0	1	0	1	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	22	10	25	13	38	34	31	64	51	73	100

Incidence Rates for Syphilis (Primary & Secondary) in the County of San Bernardino, California, and the United States, 2004-2014



*U.S. data for 2014 was not available at the time this report was published.

MEASLES

VACCINE-PREVENTABLE

Infectious Agent: Measles virus

Mode of Transmission: Airborne, droplet spread or by contact with nasal or throat secretions of an infected person

Incubation Period: average 14 days (range: 7-21 days)

Symptoms: Fever, conjunctivitis, coryza, cough, Koplik spots, descending maculopapular rash with facial involvement.

Vaccine: MMR vaccine given at 12-15 months and at 4-6 years

For more information: <http://www.cdc.gov/measles/>

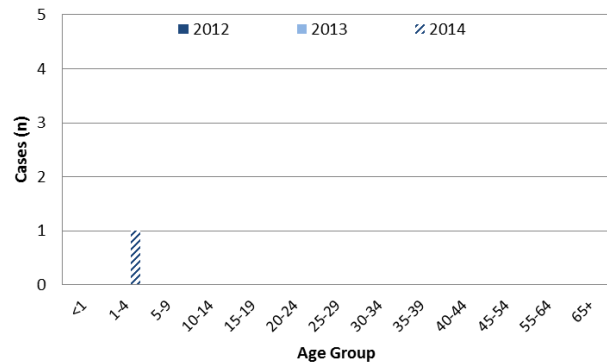
2014 REVIEW

- The County of San Bernardino has not reported a confirmed case of measles in the last ten years until the end of 2014, when a statewide outbreak associated with exposure at Disneyland began.
- The number of cases has remained below the Healthy People 2020 goal for the last 10 years.
- Data reflects Probable and Confirmed cases only, classified by the case definition found at <http://wwwn.cdc.gov/nndss/conditions/measles/case-definition/2013/>.
- The one case was a Hispanic female between the ages of 1 and 4 years old who had not received MMR vaccination.
- The genotype of this strain is unknown.
- Complications of measles can include ear infections, pneumonia, and encephalitis.

PREVENTION

- Keep your family and yourself up to date on recommended vaccines, including MMR.
- Stay home for four days after your rash onset and try to minimize contact with other members of your household, especially babies and immunocompromised people who cannot be vaccinated.
- Cover your mouth and nose if you cough or sneeze, dispose of the tissue, and keep your hands washed.

Age Distribution of Measles Cases by Count, County of San Bernardino, 2012-2014 (n=1)



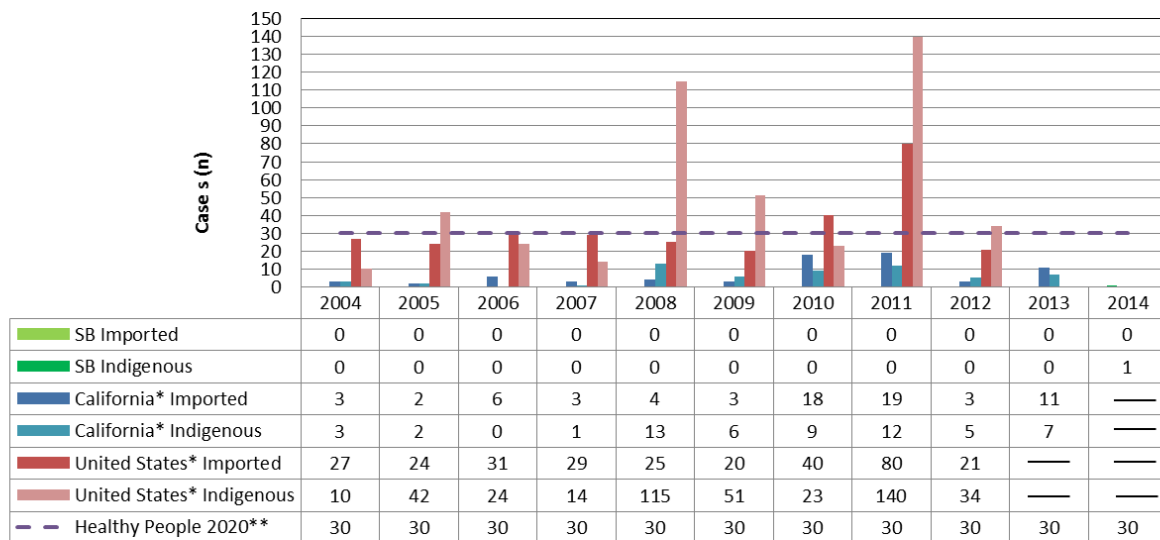
MEASLES

VACCINE-PREVENTABLE

Measles Disease Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	0	0	0	0	0	0	0	0	0	0	0
Black	0	0	0	0	0	0	0	0	0	0	0
Hispanic	0	0	0	0	0	0	0	0	0	0	1
Asian/PI	0	0	0	0	0	0	0	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1

Measles Disease Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	1
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0
45-54	0	0	0	0	0	0	0	0	0	0	0
55-64	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1

Cases of Measles Disease in the County of San Bernardino, California, and the United States, by Source Type 2004-2014



*CA data for 2014 and U.S. data for 2013-2014 were not available at the time this report was published.

**Healthy People 2020 goal is 30 or fewer US-acquired (indigenous) cases.

MENINGITIS, VIRAL

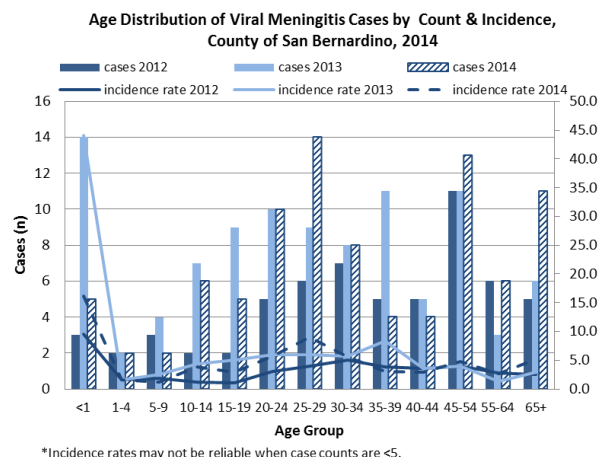
Infectious Agent: Many viruses, mainly enteroviruses in the U.S.
Mode of Transmission: Variable, depending on the specific infectious agent; enteroviruses are spread through fecal-oral route and respiratory secretions
Incubation Period: Variable, depending on infectious agent; for enteroviruses, 3-10 days
Symptoms: Usually cold-like symptoms, fever, and muscle aches or rashes
Vaccine: none
For more information: <http://www.cdc.gov/meningitis/viral.html>

2014 REVIEW

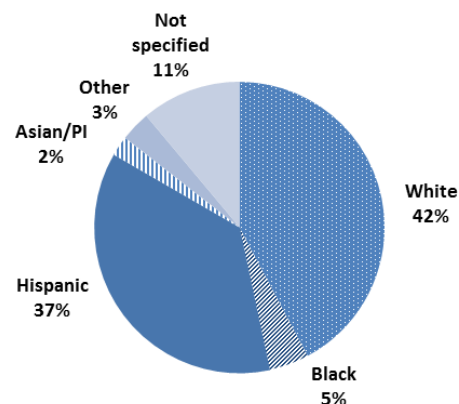
- Incidence decreased to 4.3 cases per 100,000 population in 2014 from the 4.7 cases per 100,000 in 2013. California Department of Public Health (CDPH) implemented a standardized case definition in 2014.
- Incidence was highest among children less than one year of age (16.2 cases per 100,000 population), down from the previous year (44.1 cases per 100,000 population).
- The greatest proportion of cases occurred among Whites (42%) and Hispanics (37%). Incidence was also highest among Whites (5.6 cases per 100,000 population) and Hispanics (3.1 cases per 100,000).
- Equal proportions of cases occurred among males (49%) than females (51%).
- More cases occurred during late summer months, which coincides with both known seasonality for enterovirus infections in the U.S. and could coincide with greater exposure to mosquito vectors.

PREVENTION

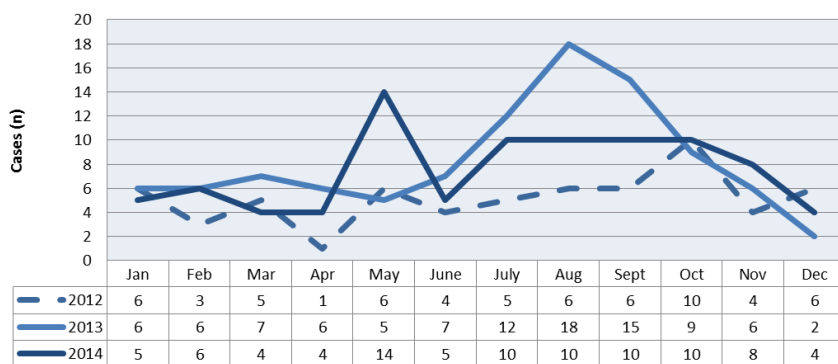
- To protect against respiratory viruses:
 - Cover nose and mouth with a tissue when coughing or sneezing.
 - Wash hands often with soap and water, especially after coughing or sneezing.
 - Avoid close contact with sick people who may release viruses into the air.
 - Clean contaminated surfaces and soiled articles first with soap and water, and then disinfect them with a dilute solution of chlorine-containing bleach (¼ cup of bleach per 1 gallon of water) can be a very effective way to inactivate enterovirus, especially in institutional settings such as child care centers.
- To protect against mosquito-borne viruses:
 - Avoid spending time outside when mosquitoes are most active.
 - Wear shoes, socks, long pants and long-sleeved shirts that are loose fitting and light colored.
 - Remove or drain all standing water around your property where mosquitoes lay eggs such as birdbaths, ponds, old tires, buckets, clogged gutters or puddles from leaky sprinklers.
 - Apply insect repellent containing DEET.



**Distribution of Race/Ethnicity Among Cases of Viral Meningitis
County of San Bernardino, 2014 (n=90)**



Seasonality: Viral Meningitis Cases by Month of Onset, County of San Bernardino, 2012-2014

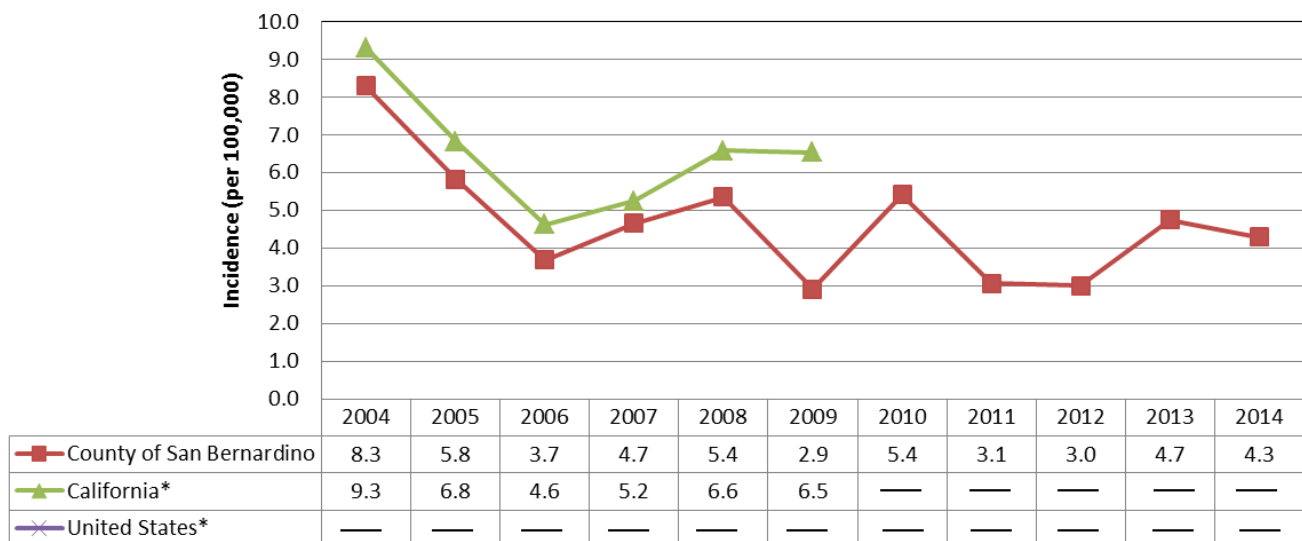


MENINGITIS, VIRAL

Viral Meningitis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	50	37	26	27	36	17	30	23	26	29	38
Black	19	13	5	12	9	8	10	8	4	7	4
Hispanic	57	36	35	44	51	22	55	27	25	40	33
Asian/PI	3	5	1	1	4	1	5	4	3	4	2
Native Am.	1	0	0	0	0	0	0	0	0	0	0
Other	0	1	1	0	0	0	1	1	1	5	3
Not specified	28	21	5	10	10	13	17	5	3	14	10
Total	158	113	73	94	110	61	118	68	62	99	90

Viral Meningitis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	16	10	12	16	11	4	9	8	3	14	5
1-4	7	6	1	3	7	2	9	2	2	2	2
5-9	34	10	1	4	15	4	11	10	3	4	2
10-14	21	8	7	12	10	8	12	5	2	7	6
15-19	15	8	7	9	13	5	12	7	2	9	5
20-24	8	11	4	7	7	9	14	10	5	10	10
25-29	14	9	14	3	11	6	8	5	6	9	14
30-34	10	10	5	5	7	3	12	3	7	8	8
35-39	4	10	3	11	4	6	7	2	5	11	4
40-44	5	12	4	5	4	3	7	2	5	5	4
45-54	17	8	6	10	10	9	6	6	11	11	13
55-64	2	5	5	6	6	1	5	4	6	3	6
65+	5	6	4	3	5	1	5	4	5	6	11
Unknown	0	0	0	0	0	0	1	0	0	0	0
Total	158	113	73	94	110	61	118	68	62	99	90

Incidence Rates for Viral Meningitis in the County of San Bernardino, California, and the United States, 2004-2014



*2010-2014 CA data were not available at the time this report was published. Viral meningitis is not a nationally-notifiable condition.

MENINGOCOCCAL DISEASE

VACCINE-PREVENTABLE

Infectious Agent: *Neisseria meningitidis*, a bacteria

Mode of Transmission: Direct contact, including respiratory secretions from noses and throats of infected people

Incubation Period: usually 3-4 days (range: 2-10 days)

Symptoms: Fever, intense headache, nausea and/or vomiting, stiff neck, photophobia, sometimes a petechial rash; can progress to meningitis

Vaccine: Available since 1974

For more information:

<http://www.cdc.gov/meningitis/bacterial.html>

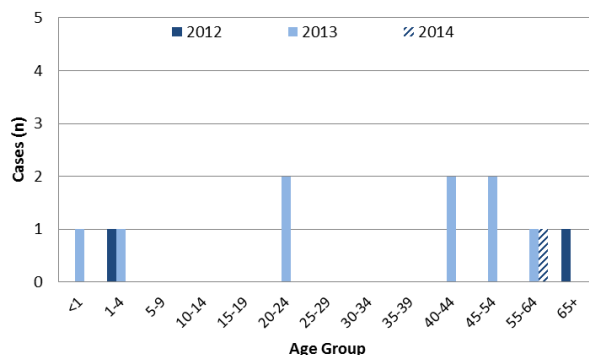
2014 REVIEW

- Incidence decreased to 0.0 cases per 100,000 population (n=1) from 0.4 cases per 100,000 in 2013 (n=9).
- Rates of meningococcal disease are generally below CA and U.S. rates, and have remained at or below the Healthy People 2020 goal of 0.3 cases per 100,000 since 2007.
- All cases (n=1) occurred among Blacks/African Americans.
- All cases (n=1) were female.
- The isolate from the 2014 case was not typeable.
- There was no distinct seasonality noted among cases in the last several years.

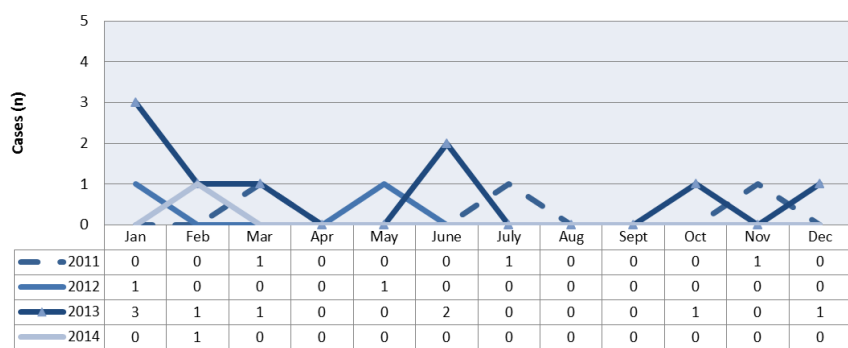
PREVENTION

- Children should receive their first dose of meningococcal conjugate vaccine (for serogroups A, C, Y, and W-135) at 11-12 years of age and a booster dose at 16-18 years of age.
- Travelers to endemic areas¹ should get vaccinated prior to travel.
- Close contacts to a case of meningococcal disease should receive antibiotics within 14 days to prevent disease.
- Cover nose and mouth when coughing or sneezing.
- Wash hands often with soap and water, especially after coughing or sneezing.

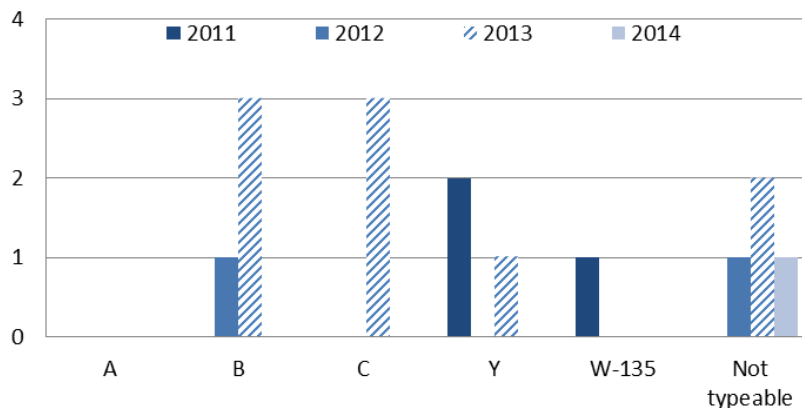
Age Distribution of Meningococcal Disease by Count, County of San Bernardino, 2012-2014 (n=12)



Seasonality: Meningococcal Disease Incidence by Month of Onset, County of San Bernardino, 2011-2014



Meningococcal Isolates by Serogroup, County of San Bernardino, 2011-2014 (n=15)



¹ See <http://wwwnc.cdc.gov/travel>

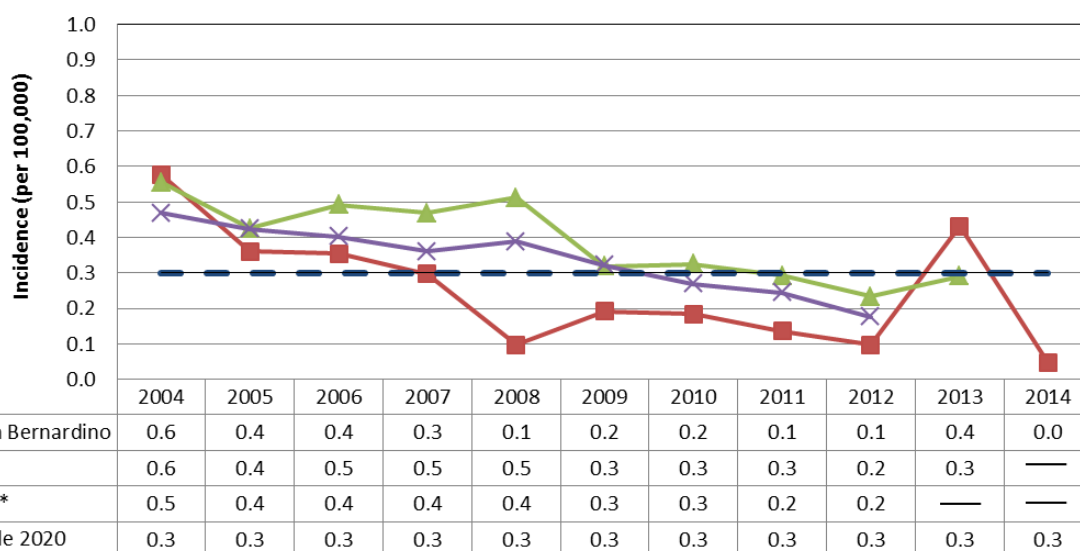
MENINGOCOCCAL DISEASE

VACCINE-PREVENTABLE

Meningococcal Disease Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	4	4	1	3	0	0	0	1	1	2	0
Black	0	0	1	1	0	0	0	0	0	0	1
Hispanic	6	2	4	2	1	3	3	2	1	7	0
Asian/PI	0	0	0	0	0	0	0	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	1	1	1	0	1	1	1	0	0	0	0
Total	11	7	7	6	2	4	4	3	2	9	1

Meningococcal Disease Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	1	1	1	1	1	0	2	0	0	1	0
1-4	0	1	1	0	0	0	1	0	1	1	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	1	0	1	0	0	1	0	0	0	0	0
15-19	2	1	2	0	0	0	0	0	0	0	0
20-24	1	0	0	0	0	0	1	1	0	2	0
25-29	0	0	0	0	0	0	0	1	0	0	0
30-34	0	1	0	0	0	1	0	0	0	0	0
35-39	0	1	0	1	0	0	0	0	0	0	0
40-44	0	0	0	1	0	0	0	0	0	2	0
45-54	3	1	1	0	0	1	0	0	0	2	0
55-64	2	1	1	2	0	1	0	1	0	1	1
65+	1	0	0	1	1	0	0	0	1	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	11	7	7	6	2	4	4	3	2	9	1

Incidence Rates for Meningococcal Disease in the County of San Bernardino, California, and the United States, 2004-2014



*CA data for 2014, U.S. data for 2013-2014 were not available at the time this report was published.

MUMPS

VACCINE-PREVENTABLE

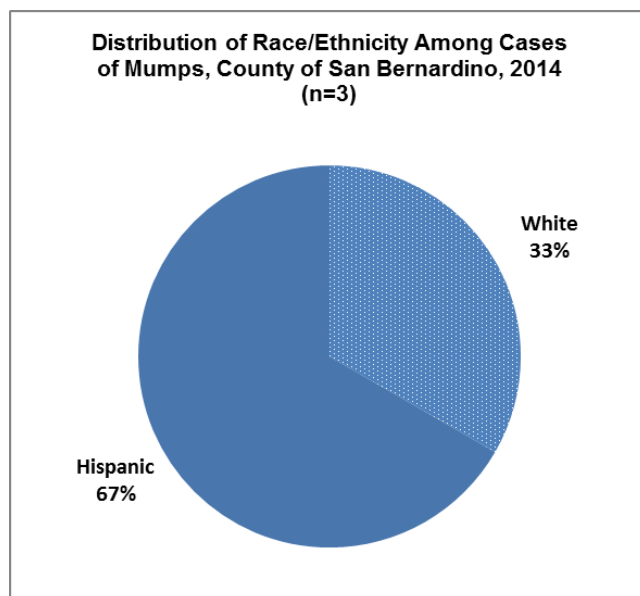
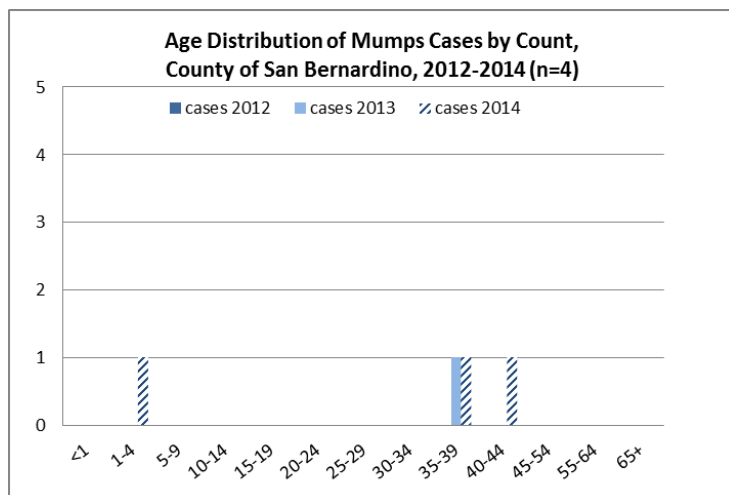
Infectious Agent: Mumps virus
Mode of Transmission: Airborne, droplet spread or by contact with saliva of an infected person
Incubation Period: 16-18 days (range: 12-25 days)
Symptoms: Fever, headache, muscle aches, tiredness, tenderness and swelling of one or more parotid glands.
Vaccine: MMR vaccine given at 12-15 months and at 4-6 years
For more information: <http://www.cdc.gov/mumps/>

2014 REVIEW

- Data reflects Probable and Confirmed cases only, classified by the case definition found at <http://wwwn.cdc.gov/nndss/conditions/mumps/case-definition/2012/>.
- The two confirmed cases reported in 2014 were male.
- Two of the three cases reported in 2014 were Hispanic (67%).
- Complications of mumps can include inflammation of the testicles, brain, ovaries and temporary or permanent deafness.

PREVENTION

- Keep your family and yourself up to date on recommended vaccines, including MMR.
- Stay home for five days after your glands begin to swell and try to minimize contact with other members of your household, especially babies and immunocompromised people who cannot be vaccinated.
- Cover your mouth and nose if you cough or sneeze, dispose of the tissue, and keep your hands washed.



Mumps Cases by Case Classification											
County of San Bernardino, 2004 - 2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Confirmed	2	2	0	2	0	0	0	0	0	0	2
Probable	0	0	0	0	0	0	0	0	0	1	1
Suspect*	0	1	4	0	0	0	0	1	4	0	3
Total	2	3	4	2	0	0	0	1	4	1	6

*not included in counts in other tables, unless otherwise noted

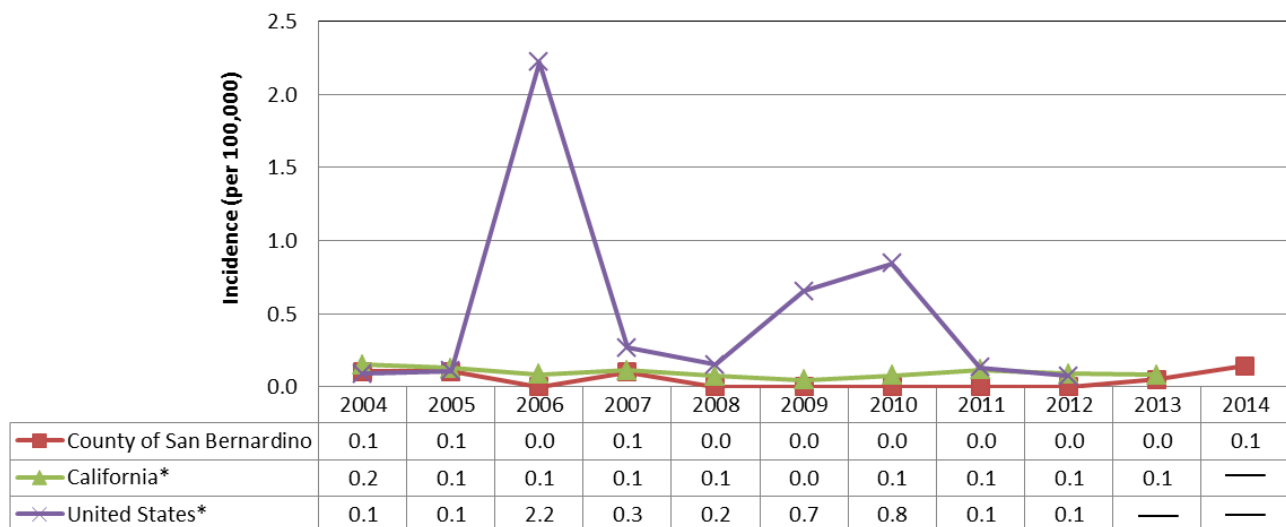
MUMPS

VACCINE-PREVENTABLE

Mumps Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	1	0	0	1	0	0	0	0	0	1	1
Black	0	0	0	0	0	0	0	0	0	0	0
Hispanic	1	0	0	0	0	0	0	0	0	0	2
Asian	0	1	1	1	0	0	0	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	0	1	0	0	0	0	0	0	0	0	0
Total	2	2	1	2	0	0	0	0	0	1	3

Mumps Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	1	0	0	0	0	0	0	0	0	0	1
5-9	0	1	0	2	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	1	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	1	1	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	1	1
40-44	0	0	0	0	0	0	0	0	0	0	1
45-54	0	0	0	0	0	0	0	0	0	0	0
55-64	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	1	2	0	0	0	0	0	1	3

Incidence Rates for Mumps in the County of San Bernardino, California, and the United States, 2004-2014



*CA data for 2014 & U.S. data for 2013-2014 were not available at the time this report was published.

PERTUSSIS (WHOOPING COUGH)

VACCINE-PREVENTABLE

Infectious Agent: *Bordetella pertussis*, a Gram negative aerobic bacteria

Mode of Transmission: Airborne and direct contact with expulsions such as large droplets from respiratory mucous membranes of infected persons.

Incubation Period: 9-10 days on average (range: 6-21 days)

Symptoms: Paroxysmal coughs lasting 1-2 months, high-pitched whoop, expulsions of clear mucus, vomiting

Vaccine: Available since 1961

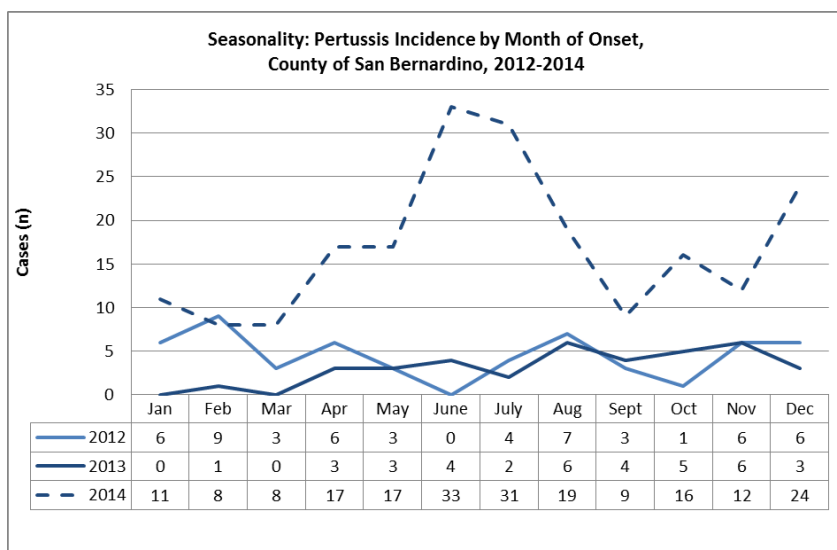
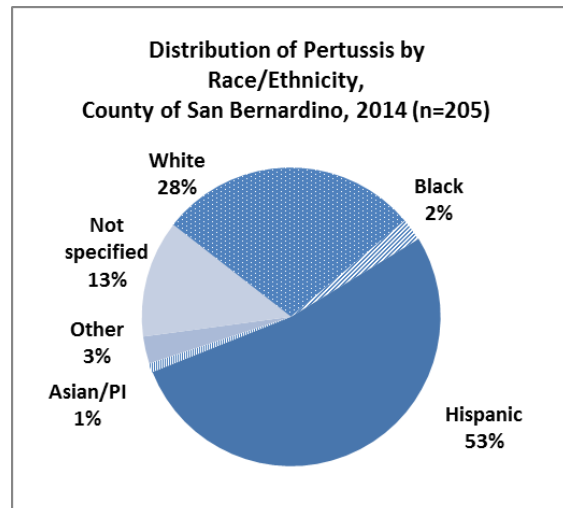
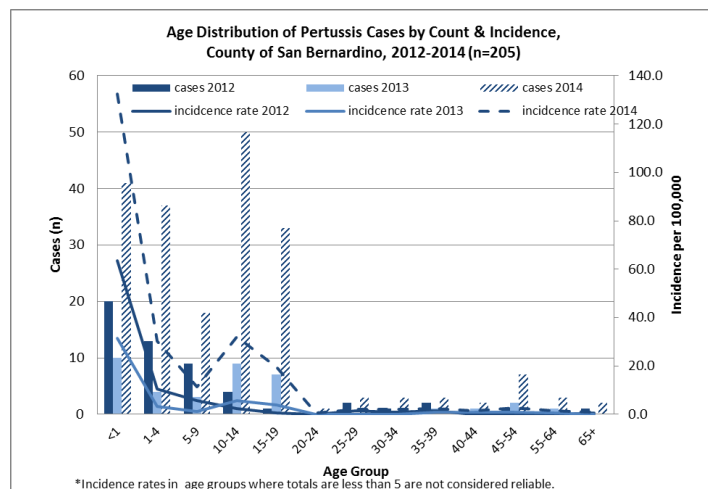
For more information: <http://www.cdc.gov/pertussis>

2014 REVIEW

- Incidence of pertussis increased almost 5 ½ times from 2013 to 2014 to 9.8 cases per 100,000 population. This coincided with the statewide epidemic, the second since 2010.
- The greatest proportion of cases was among children 10-14 years of age (24.4%), children <1 year of age (20.0%), and children 1-4 years of age (18.0%). Incidence in children under 1 year of age was highest at 132.6 cases per 100,000 population. Incidence in the 10-14 year old age group (32.0 cases per 100,000 population) and 1-4 year old age group (30.2 cases per 100,000 population) increased by 5 ½ and 9 times, respectively, from 2013 to 2014.
- Whites (28%) and Hispanic (53%) populations comprised the greatest proportion of cases, as seen in previous years. Incidence rates were also highest in these populations: 8.6 per 100,000 population in Whites and 10.2 per 100,000 population in Hispanics. Incidence in both Whites and Hispanics increased more than five times since 2013.
- Almost equal proportions of cases occurred among females (51%) and males (49%).
- There were fewer cases in the winter months. Incidence increased in spring and summer (April to August) and began to rise again in December..

PREVENTION

- Vaccination is the best method to prevent pertussis. The DTaP vaccination protects children against pertussis infection; five doses are recommended. They are usually given to children at ages 2 months, 4 months, 6 months, 15-18 months and 4-6 years. The Tdap vaccine should be given around age 11 or 12, and every 10 years thereafter and during every pregnancy. Tdap is now required for all students entering 7th grade in California.
- CDC now recommends that pregnant women receive a dose to Tdap during each pregnancy, preferably in the third trimester.
- Some health care organizations strongly recommend that adults up to the age of 65 years receive the adult form of the vaccine against pertussis.



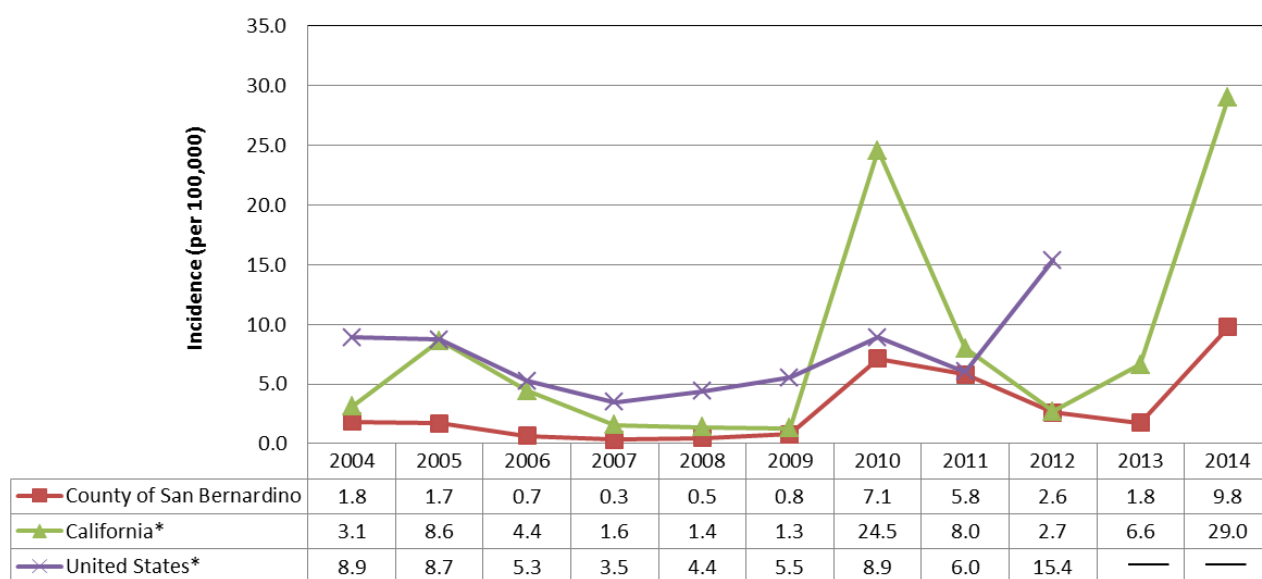
PERTUSSIS (WHOOPING COUGH)

VACCINE-PREVENTABLE

Pertussis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	17	13	6	5	4	6	43	40	13	11	58
Black	0	7	0	0	0	0	6	4	4	0	5
Hispanic	16	12	6	1	4	4	80	69	30	20	108
Asian/PI	1	0	0	0	0	0	2	2	4	0	2
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	1	0	0	0	6
Not specified	1	1	1	1	2	7	23	14	3	6	26
Total	35	33	13	7	10	17	155	129	54	37	205

Pertussis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	24	21	4	6	6	12	51	34	20	10	41
1-4	1	0	1	0	1	2	23	23	13	4	37
5-9	3	2	2	0	1	1	14	16	9	2	18
10-14	2	6	2	1	2	1	32	27	4	9	50
15-19	1	2	1	0	0	1	10	8	1	7	33
20-24	1	1	0	0	0	0	5	2	0	0	1
25-29	1	0	0	0	0	0	1	4	2	0	3
30-34	0	1	3	0	0	0	2	4	1	0	3
35-39	0	0	0	0	0	0	2	2	2	1	3
40-44	1	0	0	0	0	0	7	3	0	1	2
45-54	0	0	0	0	0	0	4	1	1	2	7
55-64	1	0	0	0	0	0	0	3	0	1	3
65+	0	0	0	0	0	0	3	1	1	0	2
Unknown	0	0	0	0	0	0	1	1	0	0	2
Total	35	33	13	7	10	17	155	129	54	37	205

Incidence Rates for Pertussis in the County of San Bernardino, California, and the United States, 2004-2014



*CA for 2014 is preliminary & U.S. data for 2013-2014 were not available at the time this report was published.

RESPIRATORY SYNCYTIAL VIRUS (RSV)

Infectious Agent: Respiratory syncytial virus (RSV)

Mode of Transmission: Through airborne respiratory droplets spread by an infected person coughing or sneezing or by direct or indirect contact with respiratory secretions from an infected person

Incubation Period: 4-6 days (range: 2-8 days)

Symptoms: Runny nose, decrease in appetite; coughing, sneezing, and fever typically develop 1 to 3 days later. Wheezing may also occur. In very young infants, irritability, decreased activity, and breathing difficulties may be the only symptoms.

Vaccine: None

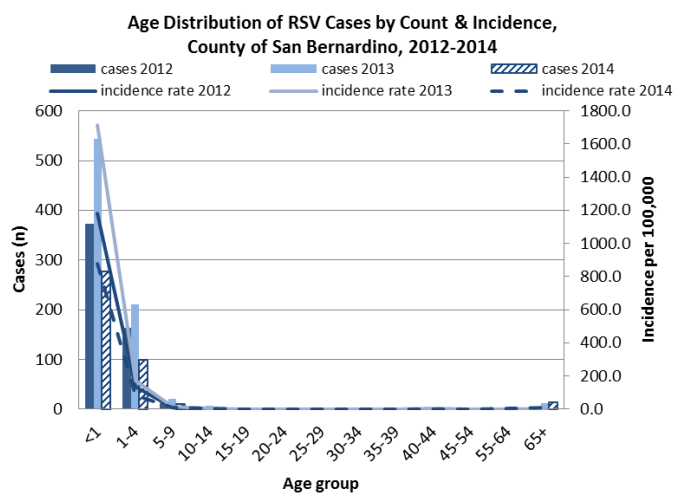
For more information: <http://www.cdc.gov/rsv/>

2014 REVIEW

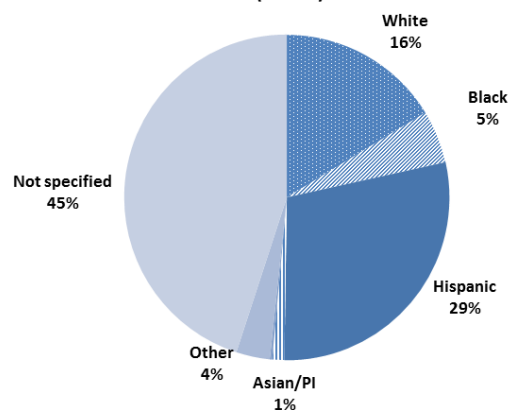
- Incidence decreased by nearly half from 2013 to 2014 to 19.9 cases per 100,000 population. Incidence appears to fluctuate every two years and the general trend in incidence has been decreasing since 2004.
- Incidence was highest among children less than one year of age (875.3 cases per 100,000 population).
- The greatest proportion of cases occurred among Hispanics (29%) and Whites (16%), although 45% of cases were missing race/ethnicity information. For cases with known race/ethnicity information, incidence rates were highest among those of Other/Multiple Race (30.6 cases per 100,000 population) and Blacks (12.6 cases per 100,000 population).
- Males comprised 56% of cases.

PREVENTION

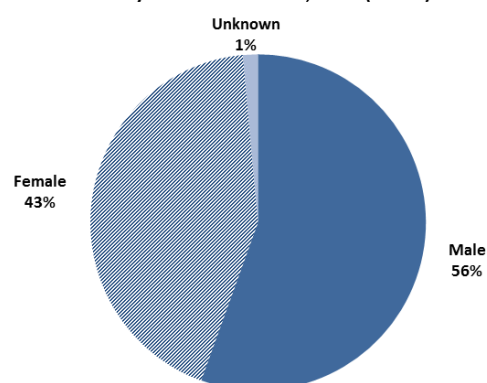
- Cover nose and mouth when coughing or sneezing.
- Wash hands often with soap and water, especially after coughing or sneezing.
- Infected people should not share cups or eating utensils with others.
- Avoid close contact with sick people who may release the virus into the air. Infected people should not spend time with high-risk children (premature infants, children under 2 years who have chronic lung or heart conditions, children with weakened immune systems).
- Limit time high-risk children spend in childcare centers.
- Clean high-contact surfaces such as doorknobs and handrails frequently.



Distribution of Race/Ethnicity Among RSV Cases, County of San Bernardino, 2014 (n=418)



RSV Cases by Gender, County of San Bernardino, 2014 (n=418)

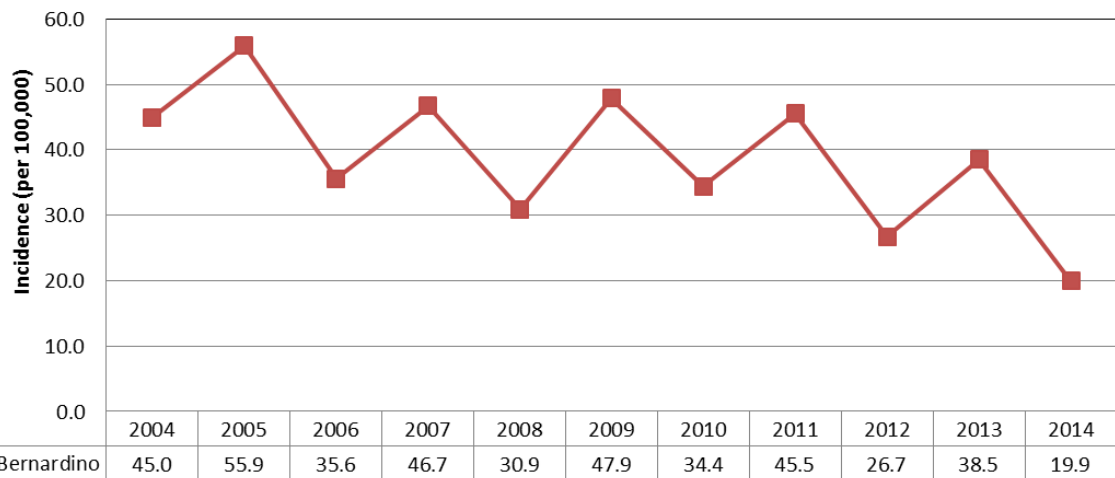


RESPIRATORY SYNCYTIAL VIRUS (RSV)

RSV Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	166	163	191	243	124	144	166	259	152	201	68
Black	53	50	40	60	44	60	65	97	67	58	22
Hispanic	234	211	307	404	290	359	321	438	243	326	120
Asian/PI	6	10	8	7	12	13	10	18	7	10	5
Native Am.	1	0	0	0	0	0	1	4	0	1	1
Other	0	5	2	0	0	0	2	2	20	35	14
Not specified	397	647	156	228	165	426	185	191	63	172	188
Total	857	1086	704	942	635	1002	750	1009	552	803	418

RSV Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	637	912	552	730	499	678	452	126	372	544	278
1-4	211	163	137	205	127	301	276	852	164	210	100
5-9	7	7	12	3	6	14	15	20	11	20	11
10-14	1	1	1	1	2	5	1	4	2	7	4
15-19	0	0	0	2	0	1	3	1	2	1	1
20-24	0	1	0	0	0	1	0	1	1	1	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	1
40-44	0	1	1	0	0	1	0	0	0	2	1
45-54	0	1	0	0	0	0	1	0	0	1	0
55-64	1	0	0	0	0	0	1	2	0	1	3
65+	0	0	1	1	1	1	1	3	0	11	14
Unknown	0	0	0	0	0	0	0	0	0	5	5
Total	857	1086	704	942	635	1002	750	1009	552	803	418

Incidence Rates for Respiratory Syncytial Virus (RSV) in the County of San Bernardino, 2004-2014



*RSV became reportable in County of San Bernardino in 2002.
RSV is not reportable in CA and is not nationally-notifiable.

TUBERCULOSIS (TB)

Infectious Agent: *Mycobacterium tuberculosis* complex, a group of acid-fast bacilli

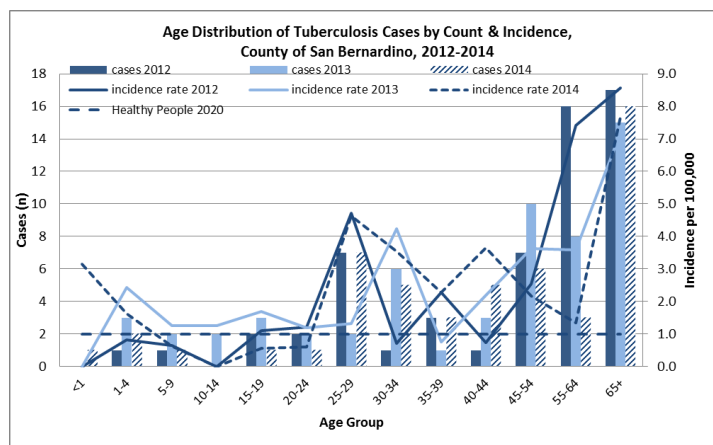
Mode of Transmission: Inhalation of infectious respiratory droplets produced by persons with pulmonary or respiratory TB

Incubation Period: Variable: 2-10 weeks from infection to demonstrable TST reaction or positive IGRA; less than 10% infected develop active TB in their lifetime, and half of those (5%) will develop symptoms within 2 years

Symptoms: Common symptoms of pulmonary TB include cough, fatigue, fever, weight loss, night sweats

Vaccine: None

For more information: <http://www.cdc.gov/tb/>

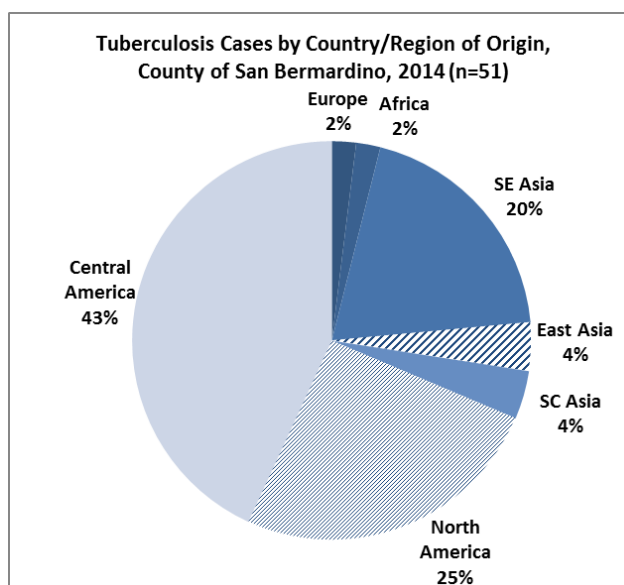
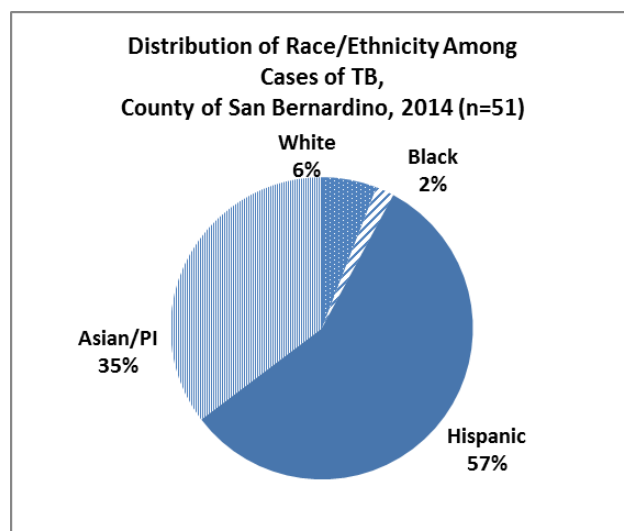


2014 REVIEW

- Incidence is lower in County of San Bernardino (2.4 cases per 100,000) than in both California and the U.S.
- Incidence was highest among adults over 65 years of age (7.7 cases per 100,000 population). All other cell counts were small.
- The greatest proportion of cases occurred among Hispanics (57%) and Asian/Pacific Islanders (35%). Incidence was highest among Asian/Pacific Islanders (13.7 per 100,000 population), comparable to previous years.
- Males comprised 61% of cases.
- Three quarters of cases (74.5%) occurred among foreign-born residents. Incidence among foreign-born residents (8.8 cases per 100,000 population) was eleven times higher than among US-born residents (0.8 cases per 100,000 population), comparable to trends in both California and the United States.
- Most cases are from Central America, including Mexico (39.2%), followed by the United States (25.5%), and Southeast Asia (19.6%), including the Philippines and Vietnam. This distribution is similar to years past.
- The proportion of TB cases that were pulmonary TB increased from 73.7% in 2013 to 84.3% in 2014. This is also slightly higher than the distribution observed in California in 2013 (69.3%).

PREVENTION

- Early diagnosis and treatment of active TB cases, particularly the most infectious smear-positive pulmonary cases, is the best method of preventing the spread of TB.
- Active case finding through contact investigation of pulmonary TB cases helps to reduce transmission.
- Treat latent TB infections with isoniazid (INH) for 6-9 months or Rifampentine to prevent progression to active disease.
- Screen HIV-infected people for TB during their first clinical evaluation and vice versa.
- Provide directly observed therapy (DOT) for TB cases.
- Educate TB cases, their contacts, and the public on the means of transmission, control, and importance of adherence to treatment.

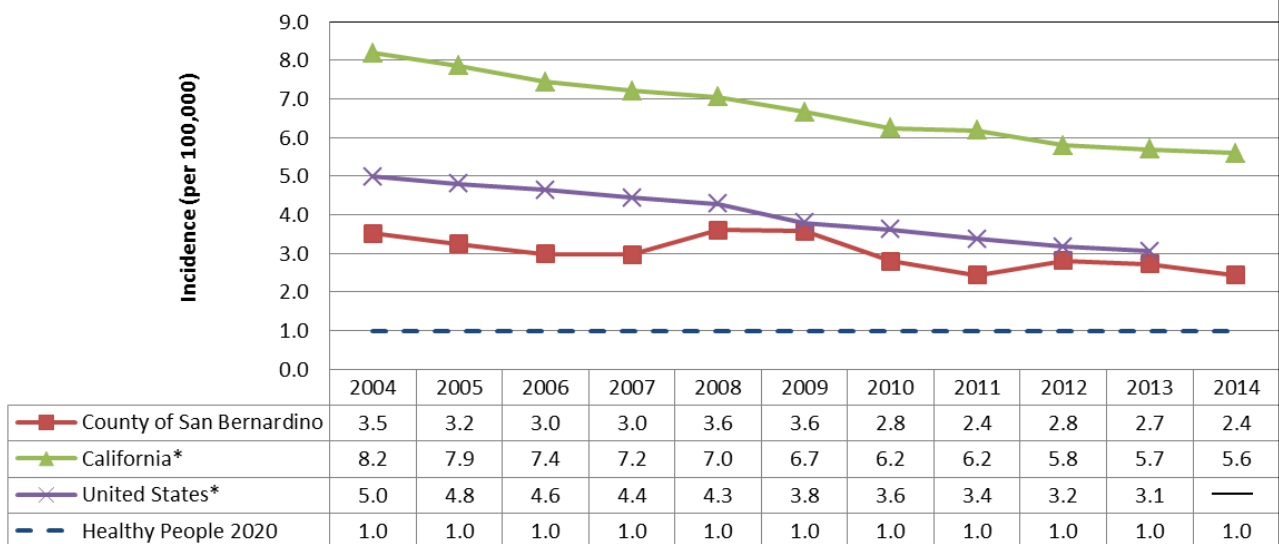


TUBERCULOSIS (TB)

Tuberculosis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	7	6	4	13	8	8	6	4	2	6	3
Black	6	4	1	5	5	4	6	4	5	4	1
Hispanic	28	35	38	25	28	26	29	25	29	27	29
Asian/PI	24	14	15	11	23	29	21	19	21	20	18
Native Am.	0	0	0	0	1	1	0	0	1	0	0
Other	0	0	1	0	1	2	0	0	0	0	0
Not specified	2	4	0	6	9	9	0	0	0	0	0
Total	67	63	59	60	75	79	62	52	58	57	51

Tuberculosis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	1	0	2	0	0	2	0	0	0	0	1
1-4	1	4	1	1	1	3	0	2	1	3	2
5-9	1	0	1	1	0	2	0	0	1	2	1
10-14	0	0	1	1	0	1	1	0	0	2	0
15-19	2	5	1	1	2	2	4	1	2	3	1
20-24	3	2	1	1	6	6	2	1	2	2	1
25-29	8	5	5	4	3	8	4	7	7	2	7
30-34	7	3	4	11	4	10	2	1	1	6	5
35-39	7	4	7	3	12	3	3	2	3	1	3
40-44	5	6	2	7	3	8	6	8	1	3	5
45-54	14	12	7	9	13	10	17	11	7	10	6
55-64	6	7	6	8	12	8	4	9	16	8	3
65+	12	15	21	13	19	16	19	10	17	15	16
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	67	63	59	60	75	79	62	52	58	57	51

Incidence Rates for TB in the County of San Bernardino, California, and the United States, 2004-2014



*U.S. data for 2014 were not available at the time this report was published.
Healthy People 2020 goal is 1.0 cases per 100,000 population.

VARICELLA HOSPITALIZATIONS/DEATHS

VACCINE-PREVENTABLE

Infectious Agent: Varicella-Zoster Virus (VZV)

Mode of Transmission: Person-to-person direct contact, airborne spread of droplet vesicle fluid, contact with vesicle fluid or mucous membrane of infected people

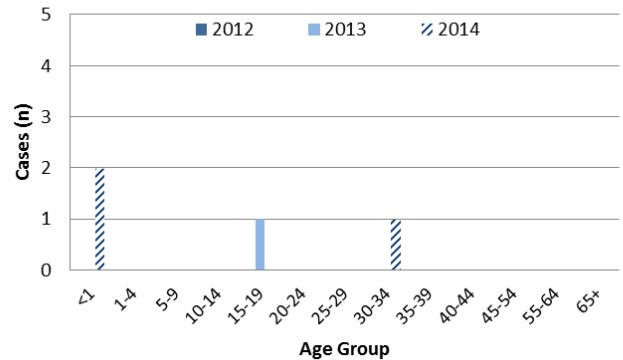
Incubation Period: 10-21 days on average (range: 10-28 days)

Symptoms: Fever, macules, papules characterized as pruritic (itchy), approximately 250-500 vesicular lesions lasting 3-4 days that then crust and scab

Vaccine: Available since 1995

For more information: <http://www.cdc.gov/chickenpox>

Age Distribution of Varicella Hospitalizations/Deaths by Count, County of San Bernardino, 2012-2014 (n=4)



2014 REVIEW

- Varicella hospitalizations and deaths have been reportable in California since 2003, and the first complete year of data was available for 2004.
- U.S. data, however, reflects only deaths resulting from varicella infection.
- San Bernardino County did not report any deaths due to varicella infection. All cases (n=3) were hospitalizations, as with the 2013 case.

PREVENTION

- Vaccination is the best method to prevent varicella. MMRV has been licensed for use in children 12 months to 12 years.
 - One dose of vaccine is recommended for children aged 12-18 months with a second dose recommended at 4-6 years up to 12 years of age.
 - For people 13 years or older, two doses of varicella vaccine are recommended 4-6 weeks apart administrations.
- Isolate infected individuals to prevent varicella transmission.
- Neonates and immunocompromised people, who are considered high-risk for developing severe varicella infection after an exposure, should receive varicella zoster immune globulin (VariZIG) as soon as possible and within 10 days of exposure.
- Shingles vaccine will reduce the risk of shingles disease and long-term pain from post-herpetic neuralgia (PHN) caused by shingles. It may also reduce the likelihood that a shingles rash blister is the source of primary varicella infection for a non-immune person.

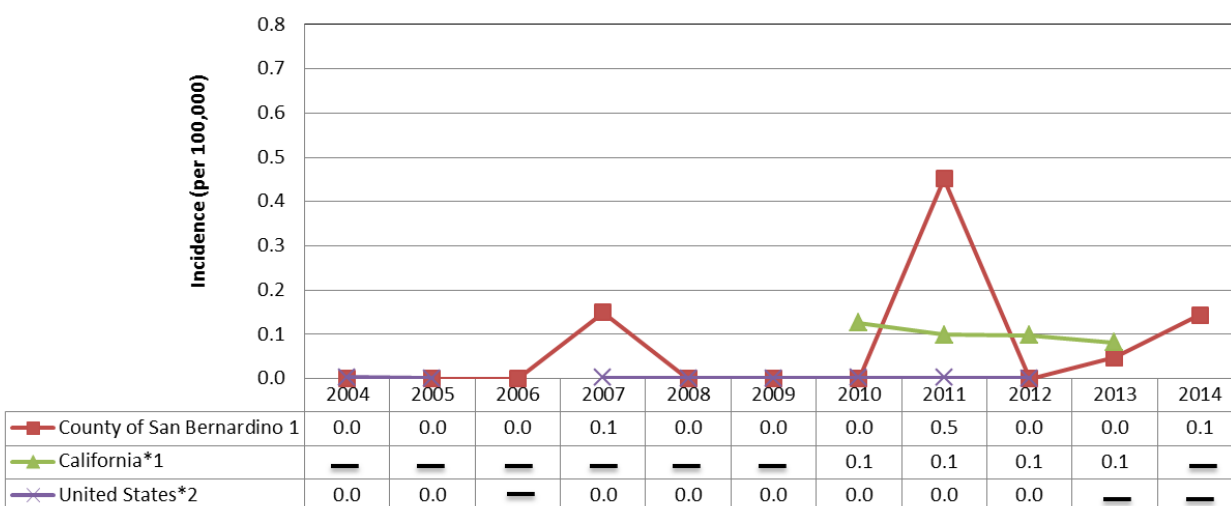
VARICELLA HOSPITALIZATIONS/DEATHS

VACCINE-PREVENTABLE

Varicella Hospitalization/Death Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	0	0	0	1	0	0	1	5	0	0	0
Black	0	0	0	1	0	0	0	3	0	0	0
Hispanic	0	0	0	1	0	0	0	2	0	0	0
Asian/PI	0	0	0	0	0	0	0	0	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	0	0	0	0	0	0	1	0	0	1	3
Total	0	0	0	3	0	0	2	10	0	1	3

Varicella Hospitalizations/Deaths Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	2
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	1	0	0	0
15-19	0	0	0	0	0	0	1	0	0	1	0
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	1	0	0	0	2	0	0	0
30-34	0	0	0	0	0	0	0	1	0	0	1
35-39	0	0	0	0	0	0	0	1	0	0	0
40-44	0	0	0	1	0	0	0	0	0	0	0
45-54	0	0	0	1	0	0	1	3	0	0	0
55-64	0	0	0	0	0	0	0	1	0	0	0
65+	0	0	0	0	0	0	0	1	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	0	0	2	10	0	1	3

Incidence Rates for Varicella Hospitalizations/Deaths in the County of San Bernardino, California, and the United States, 2004-2014



¹Complete annual data for varicella hospitalizations/deaths was not available until 2004 in San Bernardino County and CA.

²Varicella became nationally notifiable again in 2003 after it was removed in 1981, and was not notifiable in 2006.

*CA data prior to 2010, CA 2014, & U.S. data for 2013-14 were not available at the time this report was published.

COCCIDIOIDOMYCOSIS

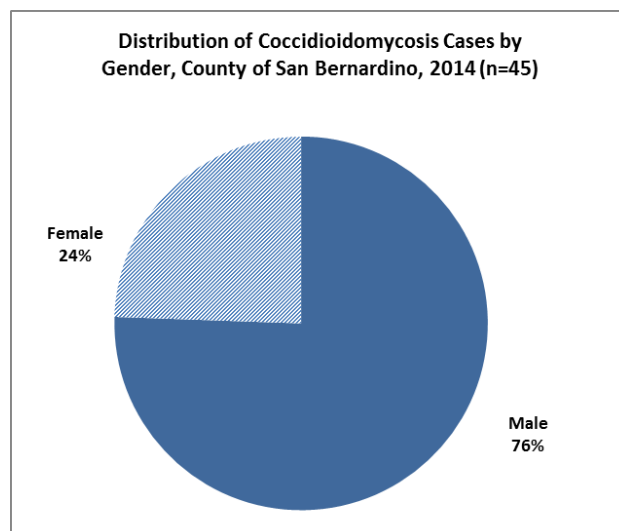
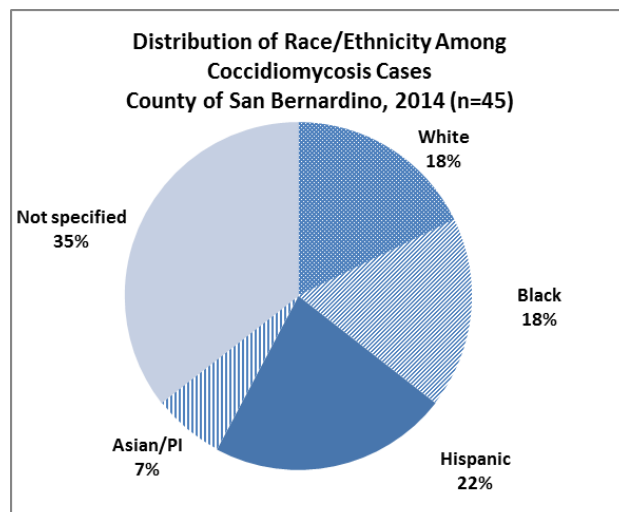
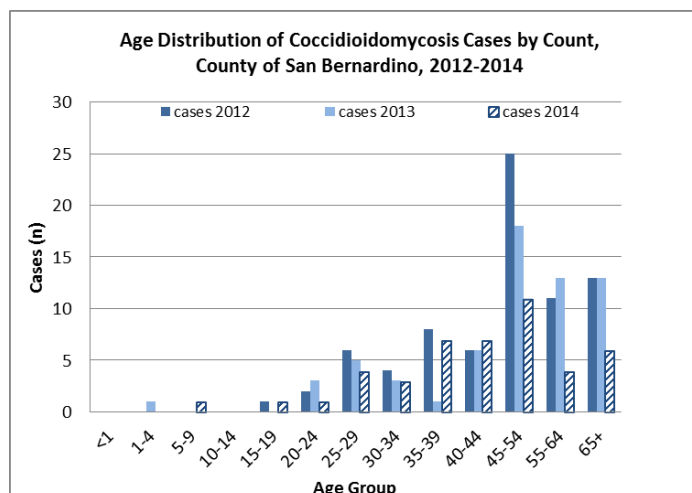
Infectious Agent: *Coccidioides immitis* or *posadasii*, a fungus
Mode of Transmission: Inhalation of spores in the air, especially after disruption of soil
Incubation Period: 1-4 weeks for primary infection; up to years for disseminated infection
Symptoms: Fever, cough, headache, rash on upper trunk or extremities, muscle aches, joint pain in the knees or ankles; advanced disease may involve multiple organs, chronic pneumonia, bone or joint infection
Vaccine: None
For more information:
<http://www.cdc.gov/fungal/diseases/coccidioidomycosis/index.html>

2014 REVIEW

- Incidence in the County of San Bernardino increased from 2008-2013, partially due to increased laboratory reporting starting in 2010. In 2014, incidence decreased to 2.1 cases per 100,000 population. Incidence in the County of San Bernardino is consistently lower than in California.
- Incident cases do not necessarily indicate exposure within the County of San Bernardino.
- The highest proportion of cases occurred among adults aged 45-54 years. The median age was 44 years (range 5-82 years). Cell counts were smaller than 5 and reliable incidence rates for all groups could not be calculated.
- Hispanics comprised 22% of cases and Whites 18% of cases. Cell counts were smaller than 5 and reliable incidence rates for all groups could not be calculated.
- Approximately 31% of cases (n=14) occurred among institutionalized² residents of the County of San Bernardino. These cases may have been exposed and infected in another jurisdiction.³
- Males comprised 76% of cases, comparable to proportions observed in past years.

PREVENTION

- If traveling to or living in an endemic environment (California, Arizona, New Mexico), avoid dusty areas when possible.
- Immune compromised persons and pregnant women in the third trimester are at higher risk for severe disease and should: 1) avoid activities that involve close contact to dust such as yard work, gardening, digging; 2) wear an N95 mask if in or near a dusty environment where construction is taking place; and 3) clean skin injuries well with soap and water if exposed to soil or dust.



² County of San Bernardino encompasses several local, state, and federal jails, prisons, and detention centers.

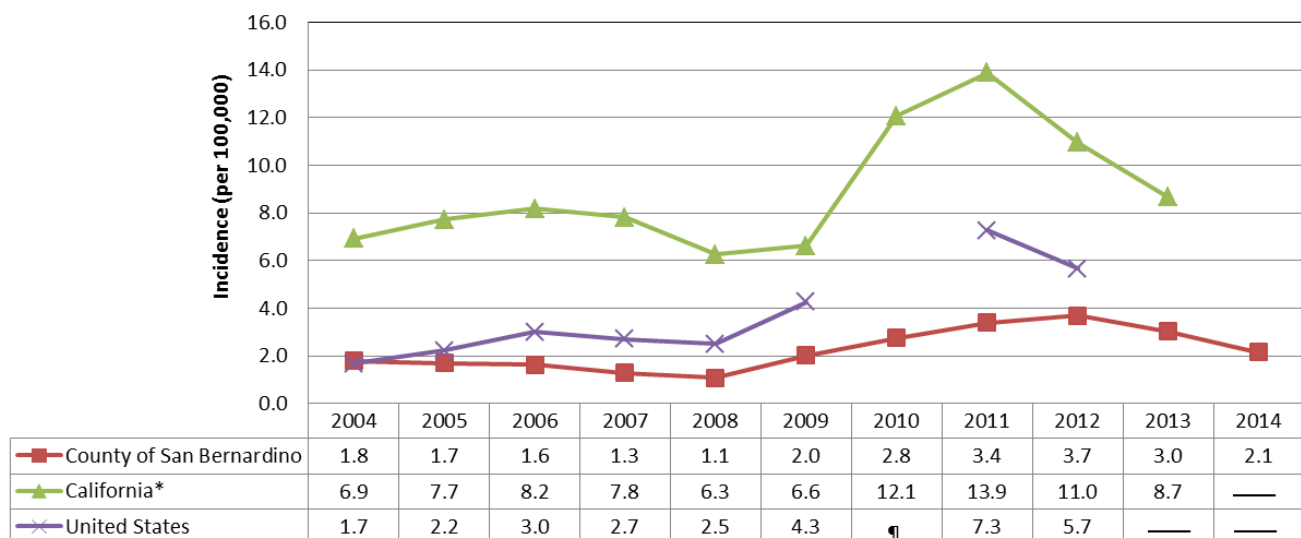
³ Inmates in state prisons are screened upon entry to each facility to which they are transferred.

COCCIDIOIDOMYCOSIS

Coccidioidomycosis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	9	5	13	9	10	9	14	18	17	15	8
Black	9	7	3	5	2	5	8	9	16	11	8
Hispanic	4	11	11	7	6	10	17	25	24	13	10
Asian/PI	7	1	2	1	2	1	2	0	3	4	3
Native Am.	0	0	0	0	0	0	0	0	0	1	0
Other	0	0	0	0	0	0	0	0	2	0	0
Not specified	5	9	3	4	2	17	19	23	14	19	16
Total	34	33	32	26	22	42	60	75	76	63	45

Coccidioidomycosis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	1	0	1	0
5-9	1	0	0	0	0	1	0	0	0	0	1
10-14	0	1	0	0	0	3	0	0	0	0	0
15-19	0	2	1	0	1	1	0	3	1	0	1
20-24	1	2	3	0	1	2	2	5	2	3	1
25-29	3	2	1	3	2	1	4	2	6	5	4
30-34	3	1	1	3	1	3	5	7	4	3	3
35-39	3	2	4	3	2	1	8	5	8	1	7
40-44	6	9	3	0	1	5	6	6	6	6	7
45-54	5	5	8	10	7	9	14	27	25	18	11
55-64	6	7	7	5	5	9	15	6	11	13	4
65+	6	2	4	2	2	7	6	13	13	13	6
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	34	33	32	26	22	42	60	75	76	63	45

Incidence Rates for Coccidiomycosis in the County of San Bernardino, California, and the United States, 2004-2014



*CA data for 2014, U.S. data for 2013-2014 were not available at the time this report was published.

¶Coccidioidomycosis was not a nationally notifiable disease.

LEGIONELLOSIS

Infectious Agent: *Legionella pneumophila*, a bacteria
Mode of Transmission: Inhalation of bacteria in the air or water, commonly from warm, moist environments (e.g. spas, humidifiers, air conditioning towers)

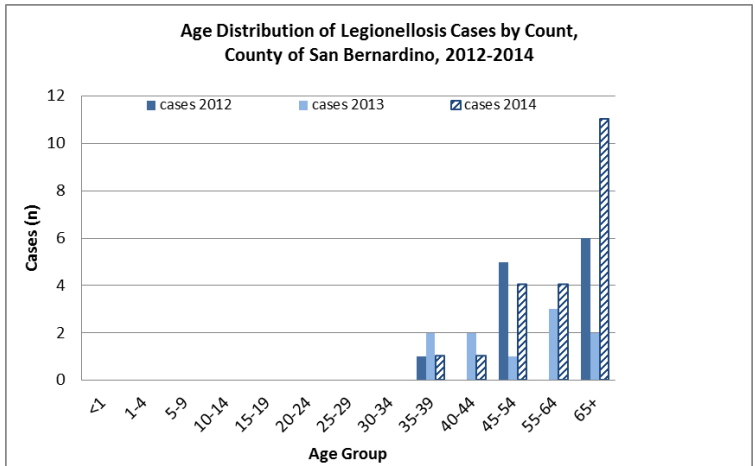
Incubation Period: 5-6 days (range: 2-10 days) for Legionnaire's disease; 24-48 hours (range: 5-72 hours) for Pontiac fever

Symptoms: Anorexia (loss of appetite), muscles aches, headache, fever, abdominal pain, diarrhea; Legionnaire's disease: pneumonia, non-productive cough; Pontiac fever: self-limited fever

Vaccine: None

For more information:

<http://www.cdc.gov/legionella/index.html>

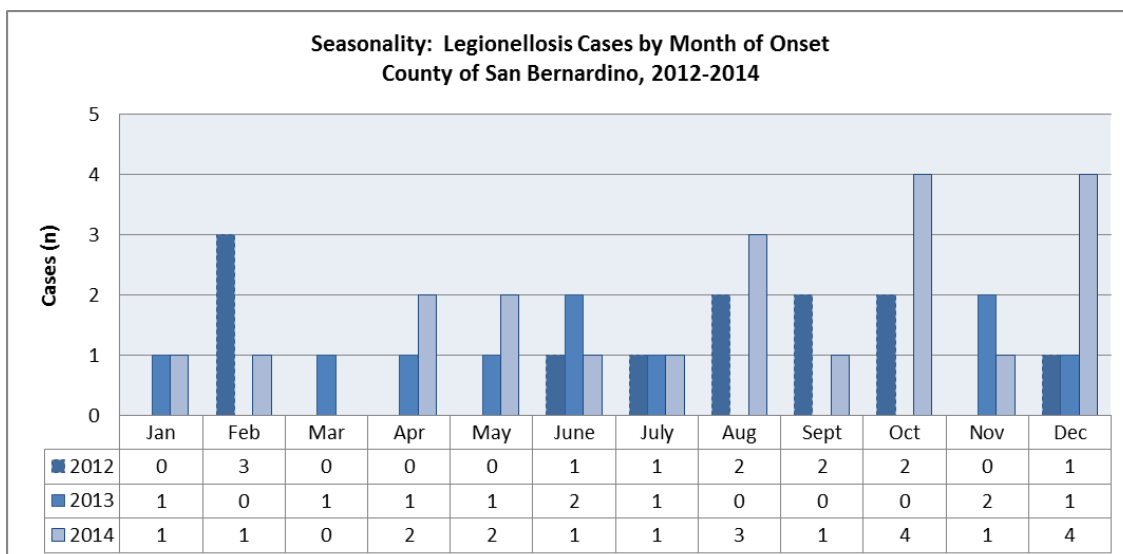
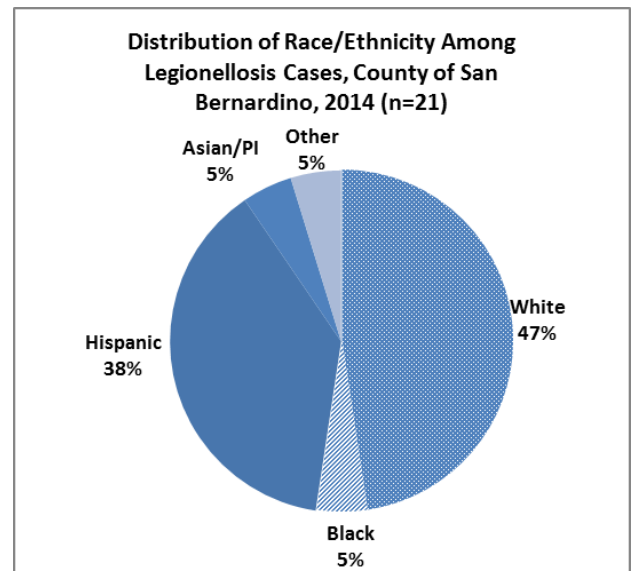


2014 REVIEW

- Incidence doubled in 2014 to 1.0 case per 100,000 from 0.5 cases per 100,000 in 2013. The largest increase in cases occurred among people aged 65 years and older.
- The largest proportion of cases (50%) occurred in adults over 45 years of age.
- Whites (47%) and Hispanics (38%) comprised the largest proportions of cases. Counts in all cells were less than 5.
- Females comprised 57% of cases, and increase in proportion when compared to previous years.
- There was no consistent seasonality observed among cases.

PREVENTION

- Cooling towers should be drained when not in use and mechanically cleaned to remove scale and sediment.
- Water treatment chemicals should be used at appropriate levels and intervals to prohibit growth of *Legionella* in pools and spas.
- Tap water should not be used in respiratory therapy devices.

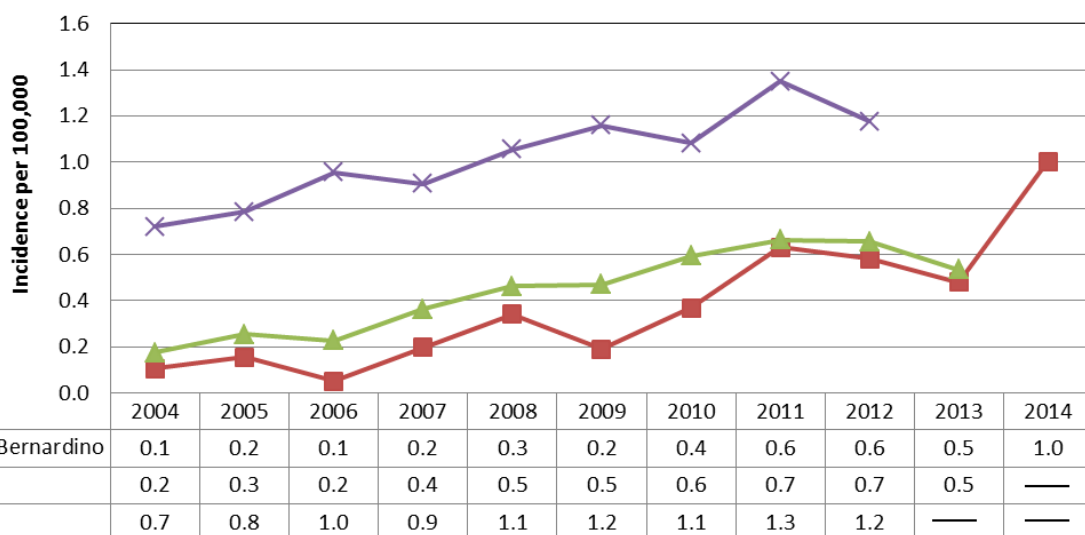


LEGIONELLOSIS

Legionellosis Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	1	2	0	2	5	1	0	9	6	4	10
Black	0	1	0	0	0	2	0	4	0	1	1
Hispanic	0	0	1	2	1	0	4	1	1	3	8
Asian/PI	1	0	0	0	0	0	0	0	0	0	1
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	1	0	1
Not specified	0	0	0	0	1	1	4	0	4	2	0
Total	2	3	1	4	7	4	8	14	12	10	21

Legionellosis Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	1	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	1	0	0	0
25-29	0	0	1	0	0	1	0	0	0	0	0
30-34	0	0	0	0	0	0	1	0	0	0	0
35-39	0	0	0	0	0	0	0	1	1	2	1
40-44	0	0	0	0	0	0	1	0	0	2	1
45-54	1	2	0	2	1	2	1	3	5	1	4
55-64	0	0	0	1	2	1	1	6	0	3	4
65+	1	1	0	1	4	0	4	2	6	2	11
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	2	3	1	4	7	4	8	14	12	10	21

Incidence Rates for Legionellosis in the County of San Bernardino, California, and the United States, 2004-2014



*CA data for 2014 and U.S. data for 2013 -14 were not available at the time this report was published.

RABIES

Infectious Agent: Usually rabies virus, one of a group of Lyssaviruses known to cause rabies

Mode of Transmission: Through direct contact with infectious saliva or infected neurological tissue as in a bite or tear in the skin; possibly through airborne transmission as in bat caves or laboratories; rarely through organ donation

Incubation Period: Highly variable in humans, usually 3-8 weeks, but can be as short as a few days or as long as several years

Symptoms: Humans—early symptoms include fever, headache, general weakness; later symptoms include confusion, slight or partial paralysis, hallucinations, difficulty swallowing, and hydrophobia (fear of water), and ultimately, death. Animals—unusually tameness in wild animals; nocturnal animals active during the day; difficulty walking, eating, or drinking; aggressiveness

Vaccine: Available for both animals and humans

For more information: <http://www.cdc.gov/rabies/index.html>

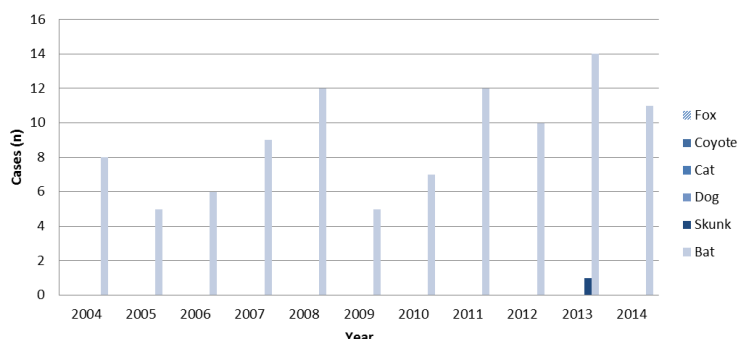
2014 REVIEW

- 100% of rabid animals detected in San Bernardino County were bats.
- Most rabid bats were collected or found in late spring through early fall (April to September), consistent with the time when many young bats leave the roost.
- The percent of animals tested that are positive for rabies has been higher in San Bernardino County than in CA and the US since 2008, but dropped below the US average in 2013 and 2014 to 3.3%.
- In San Bernardino County, the last rabid dog was detected in 1948, and the last rabid cat was identified in 1993.

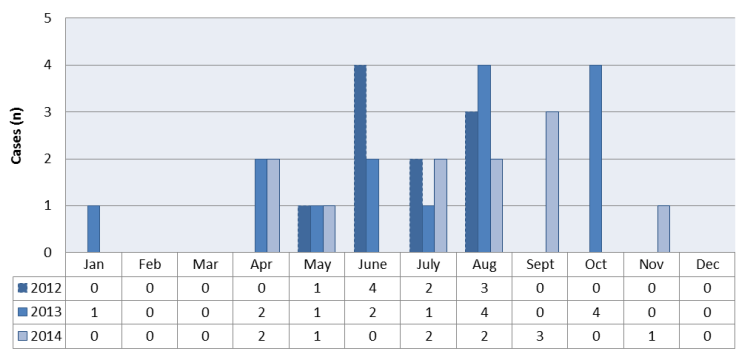
PREVENTION

- To prevent rabies in animals:
 - Keep cats, dogs, and ferrets up-to-date on their rabies vaccinations;
 - Maintain control of your pets by keeping cats and ferrets indoors and dogs under direct supervision to reduce their exposure to wildlife;
 - Spay or neuter your pets to help reduce the number of unwanted pets that may not be cared for or vaccinated regularly;
 - Call animal control to remove all stray animals from your neighborhood since they may be unvaccinated or ill.
- Avoid contact with unfamiliar or injured domestic and wild animals.
- To protect against human exposures to possible or confirmed rabid animals:
 - Seek prompt medical attention and clean bite wounds and scratches;
 - Obtain tetanus booster vaccination, if indicated;
 - Obtain both passive (human rabies immune globulin) and active immunization (rabies vaccine) in a series of four intramuscular doses on Days 0, 3, 7, and 14.
- In California, pre-exposure vaccination should be offered to persons at increased risk of rabies exposure. This "frequent risk" category includes veterinarians, animal handlers, animal control officers, laboratory workers potentially exposed to rabies virus, and persons traveling to and spending time (e.g., >1 month) in foreign countries where canine rabies is endemic.
 - The vaccination is a series of three intramuscular doses on Days 0, 7, and 21 or 28

Distribution of Rabies Cases by Animal Species and Year, County of San Bernardino, 2004-2014 (n=100)



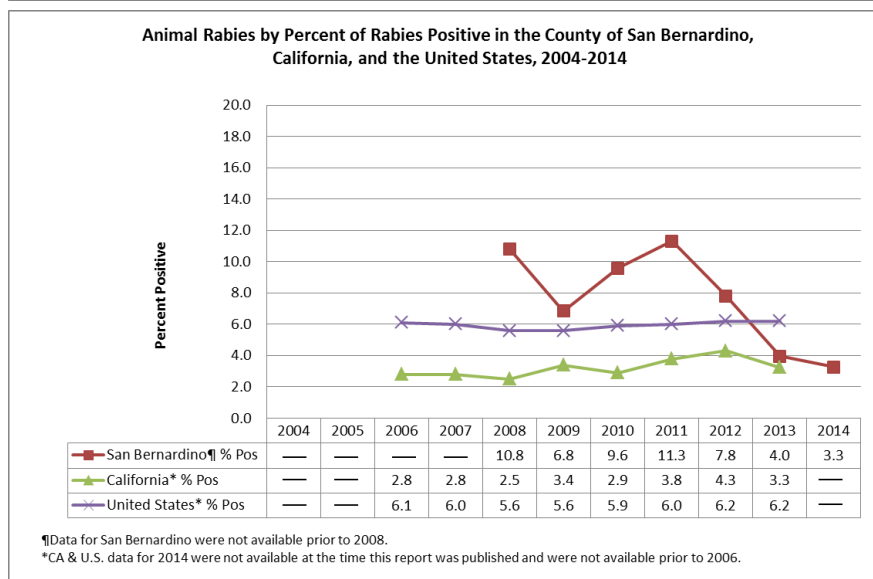
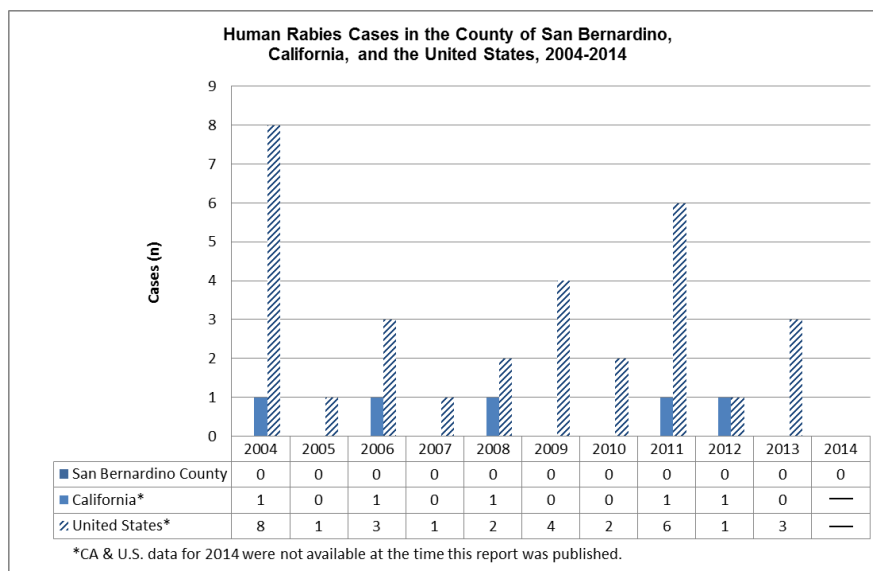
Seasonality: Animal Rabies Cases by Month of Collection, County of San Bernardino, 2012-2014 (n=36)



RABIES

Animal Rabies Cases by Species											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fox	0	0	0	0	0	0	0	0	0	0	0
Coyote	0	0	0	0	0	0	0	0	0	0	0
Cat	0	0	0	0	0	0	0	0	0	0	0
Dog	0	0	0	0	0	0	0	0	0	0	0
Skunk	0	0	0	0	0	0	0	0	0	1	0
Bat	8	5	6	9	12	5	7	12	10	14	11
Total	8	5	6	9	12	5	7	12	10	15	11

Human Rabies Cases											
County of San Bernardino vs. State of California vs. United States 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
County of San Bernardino	0	0	0	0	0	0	0	0	0	0	0
California	1	0	1	0	1	0	0	1	1	-	-
United States*	8	1	3	1	2	4	2	6	1	-	-
Total	9	1	4	1	3	4	2	7	2	0	0



MALARIA

Infectious Agent: *Plasmodium vivax*, *P. malariae*, *P. ovale*, and *P. falciparum*, parasites

Mode of Transmission: Through the bite of an infective female mosquito which injects the parasite into the blood

Incubation Period: *P. vivax* & *P. ovale*: 12-18 days, *P. malariae*: 18-40 days, *P. falciparum*: 9-14 days

Symptoms: Chills, fever, muscle aches, headache, diarrhea, vomiting, enlarged spleen, anemia; can progress to acute encephalopathy, severe anemia, renal failure, respiratory distress

Vaccine: None

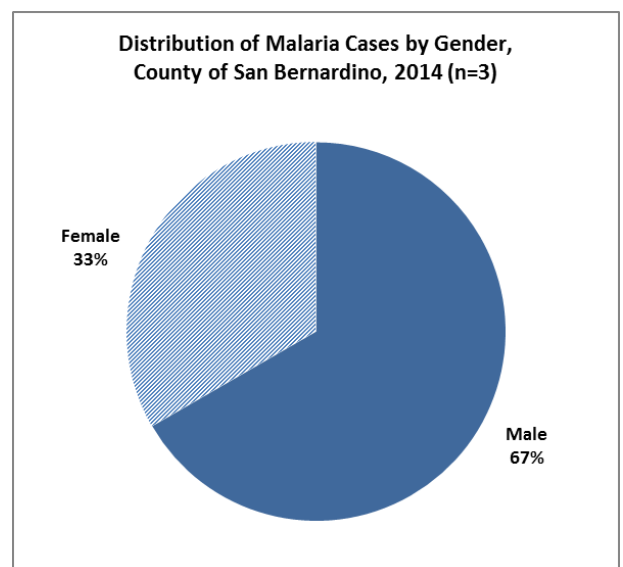
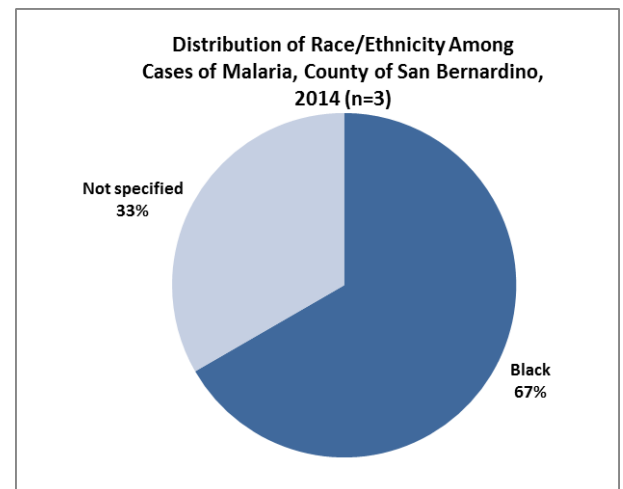
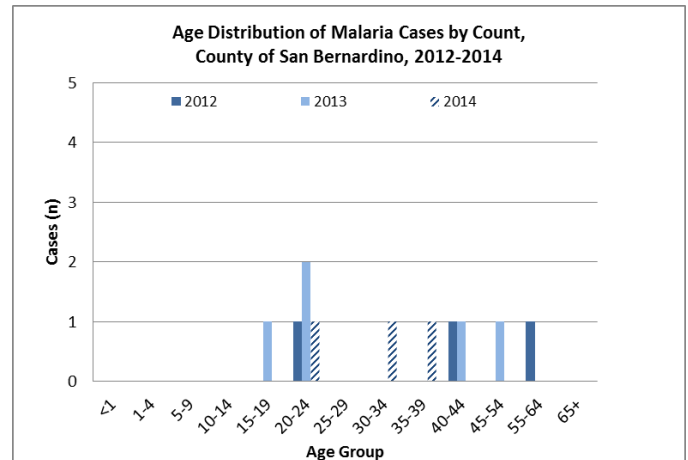
For more information: <http://www.cdc.gov/malaria/>

2014 REVIEW

- Incidence in the County of San Bernardino (0.1 per 100,000) has been relatively low when compared to statewide and national incidence.
- Median age was 32 years (range 22-35 years), slightly higher than in 2013 (23 years).
- Blacks/African Americans (67%) comprised the greatest proportion of cases.
- Cases occurred more frequently in males (67%).
- All cases reported recent travel to a malaria-endemic country. All cases (100%, n=3) reported likely exposure in Africa.
- All cases were infected with *P. falciparum*.

PREVENTION

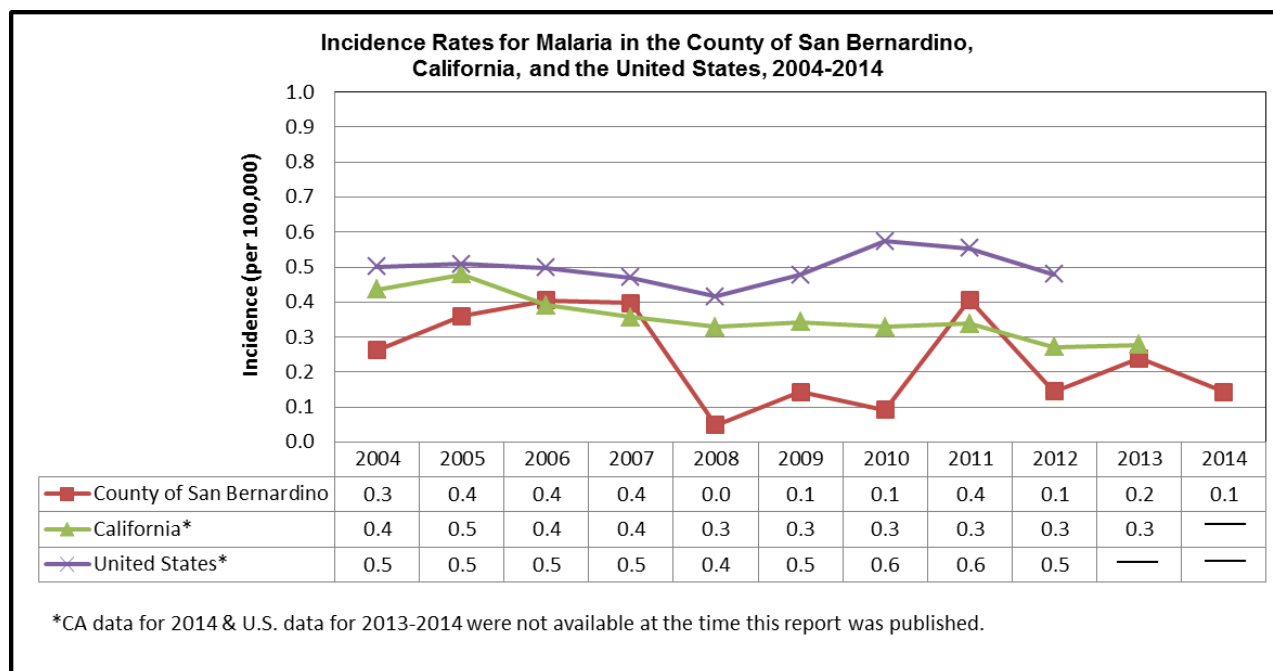
- Check to see if a travel destination is in an area where malaria transmission occurs. If so, tailor preventative measures for each traveler, including:
 - Anti-malarial medication,
 - Bed nets,
 - Insect spray, and
 - Long-sleeved clothing.



MALARIA

Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	1	0	2	3	0	1	0	2	1	2	0
Black	4	3	5	2	1	2	1	2	1	3	2
Hispanic	0	1	0	1	0	0	0	1	1	0	0
Asian/PI	0	3	1	0	0	0	0	3	0	0	0
Native Am.	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Not specified	0	0	0	2	0	0	1	1	0	0	1
Total	5	7	8	8	1	3	2	9	3	5	3

Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	1	0	1	0	0	0	0
10-14	1	0	0	0	0	0	0	1	0	0	0
15-19	0	2	2	0	0	0	0	1	0	1	0
20-24	1	0	2	2	0	0	1	1	1	2	1
25-29	0	2	0	2	0	0	0	1	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	1
35-39	0	1	1	0	0	1	0	2	0	0	1
40-44	1	0	0	2	0	0	0	1	1	1	0
45-54	1	1	1	0	0	2	0	0	0	1	0
55-64	1	0	0	1	0	0	0	1	1	0	0
65+	0	1	2	1	0	0	0	1	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	5	7	8	8	1	3	2	9	3	5	3



WEST NILE VIRUS

Infectious Agent: West Nile virus

Mode of Transmission: Through the bite of an infective mosquito which injects the virus into the blood

Incubation Period: 2-14 days

Symptoms: Most infections are asymptomatic; fever, muscle aches, headache, diarrhea, vomiting, swollen lymph glands, or skin rash on chest, stomach, back; can progress to acute encephalopathy, coma, tremors, convulsions, vision loss, numbness, and paralysis

Vaccine: None

For more information:

<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

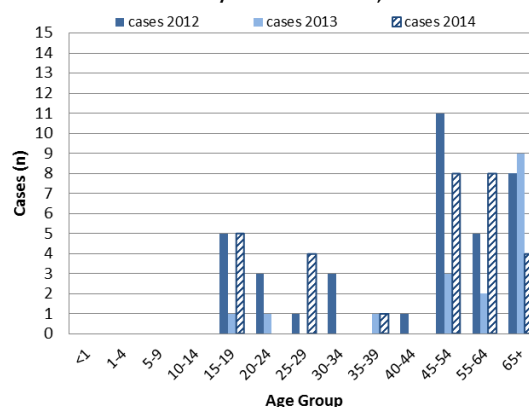
2014 REVIEW

- Incidence in the County of San Bernardino almost doubled from 2013, similar to increased incidence statewide in California during the 2014 season.
- Hispanics (60%) and Whites (23%) comprised the greatest proportion of cases.
- Males comprised 83% of cases, an increase from 2013 (59%).
- Sixty-five percent of neuroinvasive cases occurred among adults over 55 years of age. Sixty-seven percent of asymptomatic infections occurred among people aged 15-29.
- Cases occurred mainly in the late summer and early fall months, from July through October, comparable to previous seasons.
- Eighty-one percent of cases had neuroinvasive disease (n=17) and there were no fatalities.

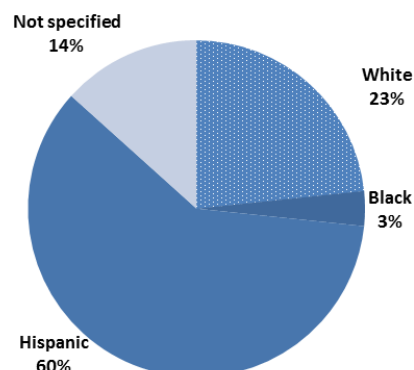
PREVENTION

- Avoid spending time outside when mosquitoes are most active (dawn and dusk).
- Wear shoes, socks, long pants and long-sleeved shirts that are loose-fitting and light colored.
- Remove or drain all standing water around your property where mosquitoes lay eggs such as birdbaths, ponds, old tires, buckets, clogged gutters or puddles from leaky sprinklers.
- Apply insect repellent containing DEET. When using DEET, be sure to read and follow the label instructions.
- Make sure doors and windows have tight-fitting screens. Repair or replace screens that have tears or holes to prevent mosquitoes from entering the home.

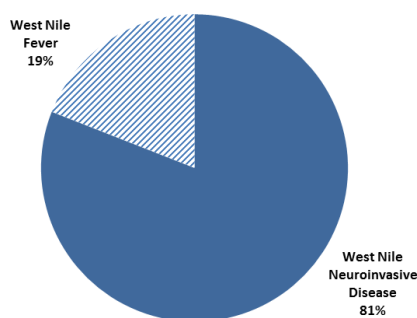
Age Distribution of West Nile Virus Cases by Count, County of San Bernardino, 2012-2014



Distribution of Race/Ethnicity Among West Nile Virus Cases, County of San Bernardino, 2014 (n=30)

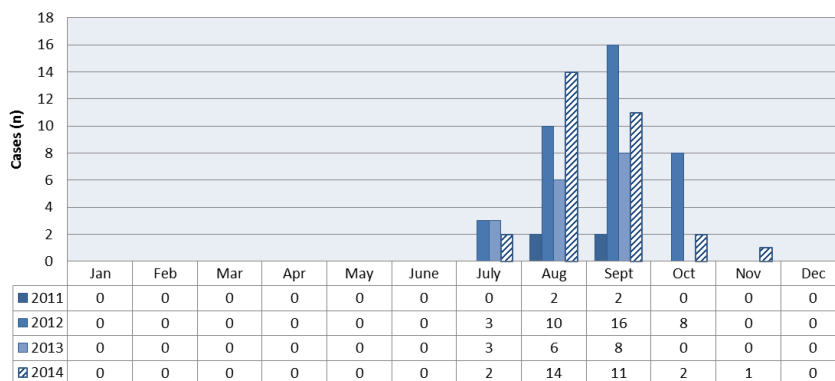


Distribution of WNV Cases by Clinical Presentation, County of San Bernardino, 2014 (n=21)



*Asymptomatic infections not included

Seasonality: West Nile Virus Cases by Month of Onset, County of San Bernardino, 2011-2014

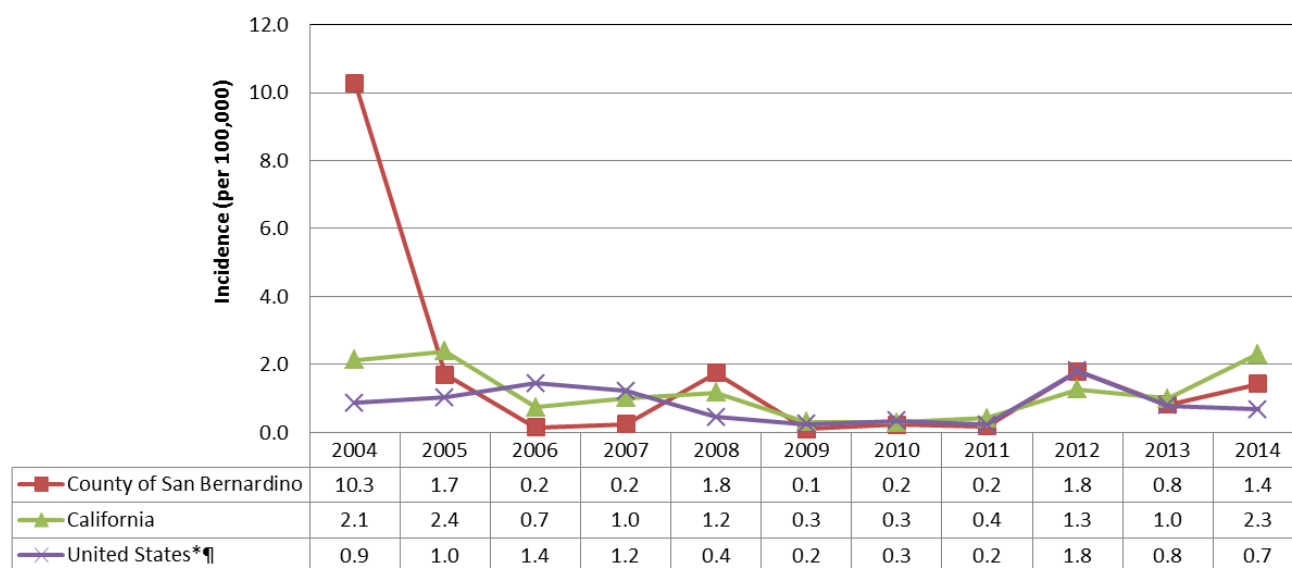


WEST NILE VIRUS

West Nile Virus Cases by Race/Ethnicity											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
White	95	19	2	4	12	0	2	1	16	6	7
Black	3	1	0	0	0	0	0	0	0	0	1
Hispanic	53	7	1	0	18	1	3	2	18	8	18
Asian/PI	6	1	0	0	0	0	0	0	1	1	0
Native Am.	0	1	0	0	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	0	0	0	0	0
Not specified	39	3	0	1	6	1	0	1	2	2	4
Total	196	33	3	5	36	2	5	4	37	17	30

West Nile Virus Cases by Age											
County of San Bernardino, 2004-2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1	0	0	0	0	0	0	0	0	0	0	0
1-4	1	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	1	0	0	0	0	0	0
10-14	4	0	1	0	0	0	0	0	0	0	0
15-19	9	0	0	0	2	0	0	0	5	1	5
20-24	6	1	0	0	1	0	0	0	3	1	0
25-29	10	0	0	0	1	0	0	0	1	0	4
30-34	6	2	1	0	4	0	0	0	3	0	0
35-39	11	5	0	0	2	0	0	0	0	1	1
40-44	19	2	0	0	5	0	0	0	1	0	0
45-54	57	12	0	1	8	1	0	0	11	3	8
55-64	32	4	1	1	6	0	3	1	5	2	8
65+	41	7	0	3	6	1	2	3	8	9	4
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	196	33	3	5	36	2	5	4	37	17	30

Incidence Rates for West Nile Virus in the County of San Bernardino, California, and the United States, 2004-2014



*U.S. data for 2014 is preliminary.

¶West Nile virus became nationally-notifiable in 2005.

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APPENDICES

APPENDIX A: HEALTHY PEOPLE 2020 PROGRESS REPORT

Comparison of Progress toward Healthy People 2020 Goals for Selected Diseases⁴, County of San Bernardino and California

Reportable Disease	County of San Bernardino 2014 Reportable Disease Rate ⁵ per 100,000 population	California 2013 Reportable Disease Rate ⁶ per 100,000 population	Healthy People 2020 Goal Per 100,000 population
AIDS in Adolescents and Adults	6.3	8.6	12.4
Campylobacteriosis	10.8*	20.2*	8.5
<i>E. coli</i> O157:H7 Infection	0.2	0.9*	0.6
Gonorrhea			
Females aged 15-44 years	273.3*	187.9 (2014 data)	251.9
Males aged 15-44 years	263.1*	302.2* (2014 data)	194.8
Hepatitis A	0.1	0.7*	0.3
Hepatitis B (Acute) in Adults	0.6	0.4	1.5
Hepatitis C (Acute)	0.1	0.2	0.25
HIV in Adolescents and Adults	11.6*	16.7*	3.5
Listeriosis	0.1	0.3*	0.2
Meningococccal Infection	0.0	0.3	0.3
Pertussis (aged < 1 year)	41 cases	Data not available	10% decrease
Salmonellosis	11.1	13.2*	11.4
Syphilis, Congenital	13.0*	20.0* (2014 data)	9.6
Syphilis, (Primary & Secondary)			
Females	0.9	1.6* (2014 data)	1.3
Males	8.7*	18.3* (2014 data)	6.7
Tuberculosis	2.4*	5.6* (2014 data)	1.0

* Denotes indicators that do not meet or exceed Healthy People 2020 goal.

⁴ Selected diseases consist of those diseases for which Healthy People 2020 comparison can be made to local indicators produced from existing and available data.

⁵ County and State population data: State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, December 2014.

State of California, Department of Finance, Demographic Research Unit. Historical and Projected State and County Births, 1970-2023, with Actual and Projected Fertility Rates by Mother's Age and Race/Ethnicity, 2000-2023. Sacramento, California: December 2014.

Available at <http://www.dof.ca.gov/research/demographic/reports/projections/births/>

⁶ California 2014 data was only available for HIV/STD and tuberculosis data at the time of this report. Other California data represented is from 2013.

APPENDIX B: CALIFORNIA DEPARTMENT OF FINANCE POPULATION ESTIMATES

COUNTY OF SAN BERNARDINO POPULATION BY RACE/ETHNICITY, SEX, AND AGE: 2014

Age	All Race / Ethnicity			White			Hispanic			Asian / Pacific Islander			Black			Native American			Multiple Race		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<1	30,924	15,765	15,159	6,996	3,567	3,429	18,422	9,393	9,029	1,488	758	730	2,525	1,286	1,239	110	56	54	1,383	705	678
1-4	122,427	62,397	60,030	27,899	14,194	13,705	73,429	37,472	35,957	6,074	3,096	2,978	9,736	4,939	4,797	398	204	194	4,891	2,492	2,399
5 - 9	157,764	80,862	76,902	32,714	16,798	15,916	99,942	51,297	48,645	7,355	3,750	3,605	11,968	6,047	5,921	379	193	186	5,406	2,777	2,629
10 - 14	156,157	80,260	75,897	33,280	17,352	15,928	97,829	50,129	47,700	7,649	3,960	3,689	12,029	6,061	5,968	457	234	223	4,913	2,524	2,389
15 - 19	168,606	86,028	82,578	37,796	19,623	18,173	102,453	51,965	50,488	8,241	4,250	3,991	14,535	7,396	7,139	596	292	304	4,985	2,502	2,483
20 - 24	177,144	91,547	85,597	44,720	23,507	21,213	101,322	52,006	49,316	8,260	4,340	3,920	17,580	9,050	8,530	740	376	364	4,522	2,268	2,254
25 - 29	155,952	80,300	75,652	45,416	23,991	21,425	82,744	42,212	40,532	8,571	4,499	4,072	15,130	7,577	7,553	763	430	333	3,328	1,591	1,737
30 - 34	143,636	72,593	71,043	42,565	21,858	20,707	76,243	38,386	37,857	9,460	4,556	4,904	11,941	6,128	5,813	646	340	306	2,781	1,325	1,456
35 - 39	131,979	65,391	66,588	37,227	18,947	18,280	72,284	35,682	36,602	9,577	4,500	5,077	10,119	4,923	5,196	542	283	259	2,230	1,056	1,174
40 - 44	134,569	65,926	68,643	38,999	19,554	19,445	72,066	35,413	36,653	10,561	4,802	5,759	10,281	4,889	5,392	590	297	293	2,072	971	1,101
45 - 54	273,640	135,045	138,595	100,136	49,921	50,215	124,344	62,198	62,146	19,706	9,040	10,666	24,219	11,426	12,793	1,451	689	762	3,784	1,771	2,013
55 - 64	228,933	110,896	118,037	108,813	53,977	54,836	78,412	37,736	40,676	18,001	8,128	9,873	19,305	8,959	10,346	1,402	665	737	3,000	1,431	1,569
65 +	214,392	96,152	118,240	118,482	54,285	64,197	60,985	26,689	34,296	16,614	7,166	9,448	14,601	6,360	8,241	1,206	566	640	2,504	1,086	1,418
Total	2,096,123	1,043,162	1,052,961	675,043	337,574	337,469	1,060,475	530,578	529,897	131,557	62,845	68,712	173,969	85,041	88,928	9,280	4,625	4,655	45,799	22,499	23,300

State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, December 2014.

APPENDIX C: REPORTABLE DISEASES AND CONDITIONS

Title 17, California Code of Regulations (CCR) §2500, §2593, §2641.5-2643.20, and §2800-2812 Reportable Diseases and Conditions*
REPORTABLE COMMUNICABLE DISEASES AND CONDITIONS
CALIFORNIA CODE OF REGULATIONS

Section 2500, 2641.5-2643.20 Reporting to the Local Health Authority

Acquired Immune Deficiency Syndrome (AIDS)
(HIV Infections only: see "Human Immunodeficiency Virus")

Amebiasis†
Anaplasmosis/Ehrlichiosis
Anthrax, human or animal*
Babesiosis†
Botulism (Infant, Foodborne, Wound, Other)*
Brucellosis, animal (except infections due to *Brucella canis*)*
Brucellosis, human*
Campylobacteriosis†
Chancroid
Chickenpox (Varicella) (only hospitalization and death)†
Chlamydia trachomatis infections, including lymphogranuloma Venereum (LGV)
Cholera*
Ciguatera Fish Poisoning*
Coccidioidomycosis
Creutzfeldt-Jakob Disease (CJD) and Other Transmissible
Spongiform Encephalopathies (TSE)
Cryptosporidiosis†
Cysticercosis or Taeniasis
Dengue*
Diphtheria*
Domoic Acid Poisoning (Amnesic Shellfish Poisoning)*
Encephalitis, Specify Etiology: Viral, Bacterial, Fungal, Parasitic†
Escherichia coli: Shiga Toxin Producing (STEC) incl *E coli O157**
Foodborne Disease††
Giardiasis
Gonococcal Infections
Haemophilus influenzae, Invasive Disease (report an incident of <15 years of age)†
Hantavirus Infections*
Hemolytic Uremic Syndrome*
Hepatitis A, acute infection†
Hepatitis B (specify acute case or chronic)
Hepatitis C (specify acute case or chronic)
Hepatitis D (Delta) (specify acute case or chronic)
Hepatitis E, acute infection
Human Immunodeficiency Virus (HIV) § (2641-2643) See Note 1
Influenza, deaths in laboratory-confirmed cases for age 0-64 years
Influenza, novel strains (human)
Legionellosis
Leprosy (Hansen Disease)
Leptospirosis
Listeriosis†
Lyme Disease

Malaria †
Measles (Rubeola) †
Meningitis, Specify Etiology: Viral, Bacterial,
Fungal, Parasitic †
Meningococcal Infections*
Mumps
Paralytic Shellfish Poisoning*
Pelvic Inflammatory Disease (PID)
Pertussis † (Whooping Cough)
Plague, Human or Animal*
Poliovirus Infection†
Psittacosis†
Q Fever†
Rabies, Human or Animal*
Relapsing Fever†
Rheumatic Fever, Acute
Rickettsial Diseases (non-Rocky Mountain Spotted
Fever), including Typhus and Typhus-like illnesses
Rocky Mountain Spotted Fever
Respiratory Syncytial Virus (RSV) ∞
Rubella (German Measles)
Rubella Syndrome, Congenital
Salmonellosis † (Not Typhoid Fever)
Scombroid Fish Poisoning*
Severe Acute Respiratory Syndrome (SARS)*
Shiga Toxin (detected in feces)*
Shigellosis†
Smallpox (Variola)*
Staphylococcus aureus Infections, Severe †‡
Streptococcal Infections † (Outbreaks of any type
and individual cases in food handlers and
dairy workers only)
Syphilis†
Tetanus
Toxic Shock Syndrome
Trichinosis†
Tuberculosis†
Tularemia, animal
Tularemia, human*
Typhoid Fever, Cases and Carriers†
Vibrio Infections†
Viral Hemorrhagic Fevers, human or animal* (e.g.,
Crimean-Congo, Ebola, Lassa, and Marburg viruses)
West Nile Virus (WNV) Infection †
Yellow Fever*
Yersiniosis †

* Occurrence of Any Unusual Disease - a rare disease or emerging disease or syndrome of uncertain etiology which could possibly be caused by a transmissible infectious agent or microbial toxin.

* Outbreak of Any Disease - occurrence of cases of a disease above the expected level over a given amount of time, in a geographic area or facility, or in a specific population group, including diseases not listed in Section 2500.

* = Extremely urgent conditions or diseases to be reported immediately by telephone.

† = Urgent conditions or diseases to be reported by fax, telephone, or mail within one (1) working day of identification of the case or suspected case.

‡ = All other conditions or diseases are to be reported within seven (7) calendar days from the time of identification.

◆ = When two (2) or more cases or suspected cases of foodborne disease from separate households are suspected to have the same source of illness, they should be reported immediately by telephone.

§ = HIV infection became reportable by name April 17, 2006 by Health and Safety Code Section 121022. For additional information on reporting HIV infection, see

<http://www.cdph.ca.gov/programs/aids/Pages/OAHIVRptgSP.aspx>, or call the HIV/STD Program at 1(800) 722-4794.

∞ = RSV became reportable on November 13, 2002 in San Bernardino County. RSV must be reported within seven (7) calendar days from the time of identification.

‡ = Severe infections due to MRSA or MSSA in a previously healthy person that resulted in ICU admission or death became reportable on 02/13/2008. A previously healthy person is defined as one who has not been hospitalized or had surgery, dialysis or residency in a long-term care facility in the past year and did not have an indwelling catheter or percutaneous medical device at the time of culture to be reported within one working day by fax, telephone, or mail.

Section 2641.5-2643.20 Additional Reporting Requirements by Health Care Providers

Note 1: Guidelines for Reporting HIV: Human Immunodeficiency Virus (HIV) infection is reportable by fax, traceable mail or person-to-person transfer within seven calendar days by completion of the HIV/AIDS Case Report form (CDPH 8641 A) available from the local health department. If faxing, please contact an HIV/STD program employee first. For completing HIV-specific reporting requirements, see Title 17, CCR Section 2641.5-2643.20 and visit: <http://www.cdph.ca.gov/programs/aids/Pages/OAHIVRptgSP.aspx>

APPENDIX C: REPORTABLE DISEASES AND CONDITIONS (CONTINUED)

Title 17, California Code of Regulations, Sections 2505 & 2641.5 – 2643.20 REPORTABLE INFECTIOUS DISEASES: REPORTING BY LABORATORIES

Section 2505 and 2612. Notification by Laboratories. Laboratories are to report the following diseases: (8/1/2011)

List (e)(1) ▲

Anthrax, animal (*B. anthracis*) and See Note 1
Anthrax, human (*B. anthracis*) and See Note 1
Botulism and See Note 1
Brucellosis, human (all *Brucella* spp.) and See Note 1
Burkholderia pseudomallei and *B. mallei*
(detection or isolation from a clinical specimen) and See Note 1
Influenza, novel strains (human)
Plague, animal and See Note 1
Plague, human and See Note 1
Smallpox (*Variola*) and See Note 1
Tularemia, human (*F. tularensis*)
Viral hemorrhagic Fever agents, animal (VHF),
 (e.g., Crimean-Congo, Ebola, Lassa
 and Marburg viruses) and See Note 1
Viral Hemorrhagic Fever agents, human
 (VHF), (e.g., Crimean-Congo, Ebola, Lassa and Marburg viruses) and See Note
 1

List (e)(2) ■

Acid-fast bacillus (AFB)
Anaplasmosis/Ehrlichiosis
***Bordetella pertussis* acute infection**, by culture molecular
 identification
***Borrelia burgdorferi* infection**
Brucellosis, animal (*Brucella* spp. except *Brucella canis*)
Campylobacteriosis (*Campylobacter* spp.) (detection or
 isolation from a clinical specimen)
Chancroid (*Haemophilus ducreyi*)
***Chlamydia trachomatis* infections**, including lymphogranuloma venereum
Coccidioidomycosis
Cryptosporidiosis
***Cyclosporiasis* (*Cyclospora cayetanensis*)**
Dengue (dengue virus)
Diphtheria
Encephalitis, arboviral
***Escherichia coli*: shiga toxin producing (STEC) including E.**
***coli* O157**
Giardiasis (*Giardia lamblia*, *intestinalis*, or *duodenalis*)
Gonorrhea
Haemophilus influenzae (report an incident of less than 15
 years of age, from sterile site)
Hantavirus Infections
Hepatitis A, acute infection
Hepatitis B, acute or chronic infection (specify gender)
Hepatitis C, acute or chronic infection and See Note 2
Hepatitis D (Delta), acute or chronic infection
Hepatitis E, acute infection (detection of hepatitis E virus
RNA from a clinical specimen or positive serology)
Legionellosis (*Legionella* spp.) (antigen or culture)
Leprosy (Hansen Disease) (*Mycobacterium leprae*)
Leptospirosis (*Leptospira* spp.)
Listeriosis (*Listeria*)
Malaria and See Note 4
Measles (Rubeola), acute infection
Mumps (mumps virus), acute infection
Mycobacterium tuberculosis and See Note 5
Neisseria meningitidis (sterile site isolate)
Poliovirus
Psittacosis (*Chlamydophila psittaci*)
Q Fever (*Coxiella burnetii*)
Rabies, animal or human
Relapsing Fever (*Borrelia* spp.) (identification of *Borrelia* spp.
 spirochetes on peripheral blood smear)
***Rickettsia*, any species, acute infection** (detection from a
 clinical specimen or positive serology)
Rocky Mountain Spotted Fever (*Rickettsia rickettsii*)
Rubella, acute infection
***Salmonellosis* (*Salmonella* spp.)** and See Note 6
Shiga toxin (detected in feces)
Shigellosis (*Shigella* spp.)
Syphilis
Trichinosis (*Trichinella*)
Tuberculosis
Tularemia, animal (*F. tularensis*) and See Note 1
Typhoid
***Vibrio* species infections**
West Nile virus infection
Yellow Fever (yellow fever virus)
Yersiniosis (*Yersinia* spp., non-pestis) (isolation from a
 clinical specimen)

▲ These diseases shall be reported by telephone within **one (1) hour**, and followed by written report submitted by electronic facsimile transmission or electronic mail within **one (1) working day** to local health officer in jurisdiction where the health care provider who submitted the specimen is located.

■ These diseases shall be submitted by courier, mail, electronic facsimile transmission or electronic mail within **one (1) working day** to the local health officer in the jurisdiction where the health care provider who submitted the specimen is located.

All laboratory notifications are acquired in confidence. The confidentiality of patient information is always protected.

APPENDIX C: REPORTABLE DISEASES AND CONDITIONS (CONTINUED)

ADDITIONAL REPORTING REQUIREMENTS (TITLE 17, CCR, SECTION 2505)

§= HIV infection became reportable by name April 17, 2006 by Health and Safety Code Section 121022. For additional information on reporting HIV infection, see <http://www.cdph.ca.gov/programs/aids/Pages/tOAHIVRptgSP.aspx> or call the HIV/STD Program at (800) 722-4794.

Note 1: Anthrax, Avian Influenza, Botulism, Brucellosis, Glanders, Melioidosis, Plague, Smallpox, Tularemia, and Viral Hemorrhagic Fevers
When a laboratory receives a specimen for the laboratory diagnosis of a suspected human case of one of these diseases, such laboratory shall **communicate immediately by telephone** with the Microbial Disease Laboratory 510-412-3700 (or, for Avian influenza, Smallpox or Viral Hemorrhagic Fevers, with the Viral and Rickettsial Disease Laboratory 510-307-8585) of the Department of Public Health for instructions.

Note 2: Guidelines for Reporting Hepatitis C: Report all HCV positive RIBA tests; all HCV RNA positive tests (e.g. NAT); all HCV genotype reports; and anti-HCV reactive by a screening test (e.g., EIA or CIA) at or above the S/CO ratio or index value predictive of a true positive. The URL for the s/co ratios that meet the CDC case definition is: http://www.cdc.gov/ncidod/diseases/hepatitis/c/sc_ratios.htm

Note 3: Guidelines for Reporting HIV: Human Immunodeficiency Virus (HIV), including antibody tests, viral loads, antigens and CD4 counts and percents from HIV positive individuals, is reportable by fax, traceable mail, or person-to-person transfer within seven calendar days. If faxing, please contact an HIV/STD program employee first. For complete HIV-specific reporting requirements, see Title 17, CCR Section 2641.5-2643.20, HSC 121023 and 120130(g) and <http://www.cdph.ca.gov/programs/aids/Pages/tOAHIVRptgSP.aspx>.

Note 4: Guidelines for Reporting Malaria: Any clinical laboratory that makes a finding of malaria parasites in the blood film of a patient shall immediately submit one or more such blood film slides for confirmation to the local public health laboratory for the local health jurisdiction where the health care provider is located. When requested, all blood films must be returned to the submitter.

Note 5: Guidelines for Reporting Tuberculosis: Any laboratory that isolates *Mycobacterium tuberculosis* from a patient specimen must submit a culture to the local public health laboratory for the local health jurisdiction in which the health care provider's office is located as soon as available from the primary isolates on which a diagnosis of tuberculosis was established. Also, the information required for laboratory reporting listed below must be submitted with the culture.

Unless drug susceptibility testing has been performed by the clinical laboratory on a strain obtained from the same patient within the previous three months or the health care provider who submitted the specimen for laboratory examination informs the laboratory that such drug susceptibility testing has been performed by another laboratory on a culture obtained from that patient within the previous three months, the clinical laboratory must do the following:

- Perform or refer for drug susceptibility testing on at least one isolate for each patient from whom *Mycobacterium tuberculosis* was isolated,
- Report the results of drug susceptibility testing to the local health officer of the city or county where the submitting physician's office is located within one (1) working day from the time the health care provider or other authorized person who submitted the specimen is notified, and
- If the drug susceptibility testing determines the culture to be resistant to at least isoniazid and rifampin, in addition, submit one culture or subculture from each patient from whom multidrug-resistant *Mycobacterium tuberculosis* was isolated to the local public health laboratory (as described above).

Whenever a clinical laboratory finds that a specimen from a patient with known or suspected tuberculosis tests positive for acid fast bacillus (AFB) staining and the patient has not had a culture which identifies that acid fast organism within the past 30 days, the clinical laboratory shall culture and identify the acid fast bacteria or refer a subculture to another laboratory for those purposes.

Note 6: Guidelines for Reporting Salmonella: Title 17, CCR, Section 2612 requires that a culture of the organisms on which a diagnosis of salmonellosis is established must be submitted to the local public health laboratory and then to the State's Microbial Diseases Laboratory for definitive identification.

APPENDIX C: REPORTABLE DISEASES AND CONDITIONS (CONTINUED)

REPORTABLE DISEASES AND CONDITIONS

California Code of Regulations

HOW TO REPORT: **Extremely urgent conditions or diseases** * (i.e., anthrax, botulism, cholera, dengue, diphtheria, plague and rabies) should be reported by telephone immediately, 24 hours a day. Other urgent conditions or diseases □ should be reported by telephone during regular business hours. Non-urgent conditions may be reported by telephone or mail on confidential morbidity report (CMR) forms. These forms must be filled out completely. All of the requested information is essential, including the laboratory information for selected diseases on the front of the form. All telephone and mailed reports are to be made to the Epidemiology Program in San Bernardino.

County of San Bernardino Department of Public Health
351 N. Mt. View Ave, San Bernardino, CA 92415-0010
(909) 387-6377 FAX (909) 356-3805 Night and Weekend Emergency

Epidemiology Program (800) 722-4794
Tuberculosis Control Program (800) 722-4794
HIV/STD Program (800) 722-4794

ORDERING CMRs: For the reporting of non-urgent conditions we will supply CMRs to all providers wishing to utilize them. Once or twice weekly you may insert all accumulated CMRs into an envelope and mail them. For a copy of the CMR form, contact Epidemiology at (800) 722-4794 or go to the Communicable Disease Section website at

http://www.sbcounty.gov/pubhlth/programs_services/communicable_disease_section/communicable_disease_home.htm

ANIMAL BITE: Animal bites by a species subject to rabies are reportable in order to identify persons potentially requiring prophylaxis for rabies. Additionally, vicious animals are identified and controlled by this regulation and local ordinances (California Code of Regulations, Title 17, Sections 2606, et seq.; Health and Safety Code Sections 1900-2000). Reports can be filed with the local animal control agency or the County Animal Control Office at 1-800-472-5609.

LABORATORY REPORTING: Forward a copy of the laboratory report within the specified time period. Line listings are not acceptable. Forward to the county in which the health care provider is located or to the State Health Officer if out of California. The following information should be included:

Patient Information

- Name
- Date of birth
- Identification number
- Address (if known)
- Telephone number (if known)

Specimen Information

- Result
- Date taken
- Date reported
- Accession number

Provider Information

- Name
- Address
- Telephone number

REPORTABLE NON-COMMUNICABLE DISEASES AND CONDITIONS Section 2800-2812, 2593

DISORDERS CHARACTERIZED BY LAPSES OF CONSCIOUSNESS (includes Alzheimer's Disease). A physician and surgeon shall notify the local health officer within seven (7) calendar days of every patient 14 years of age or older diagnosed with a disorder characterized by lapses of consciousness. Examples of medical conditions that this section may cover include Alzheimers disease and related disorders, seizure disorders, brain tumors, narcolepsy, sleep apnea and abnormal metabolic states, including hypo- and hyperglycemia associated with diabetes. Reporting requirements and exclusions are further defined in CCR Title 17 Division 1 Chapter 4 Sections 2800-2812.

PESTICIDE EXPOSURE: The Health and Safety Code, Section 105200, requires that a physician who knows, or who has reason to believe, that a patient has a known or suspected case of pesticide-related illness or condition, must report the case to the local health officer by telephone within 24 hours. This reporting requirement includes all types of pesticide related illnesses: skin and eye injuries, systemic poisonings, suicides, homicides, home cases, and occupational cases. Failure to comply with the foregoing reporting requirement renders the physician liable for a civil penalty of \$250.00. Phone reports may be made to (800) 722-4794. For occupational exposure there is an additional requirement to send the "Doctor's First Report of Occupational Injury or Illness" to the Department of Health within seven days. Copies of the report form (5021, Rev. 4/92) may be obtained from the same office for future use.

CANCER REPORTING: Certain kinds of cancer meaning all malignant neoplasms, including carcinoma in situ, which are specified in the California Cancer Reporting System Standards and the International Classification of Diseases for Oncology, shall be reported to the regional cancer registry within 30 days by physicians and surgeons, and those facilities designated as cancer reporting facilities. For additional information on cancer reporting requirements, please contact the Desert Sierra Cancer Surveillance Program at (909) 558-6170 or obtain their publication at <http://www.ccrca.org>.

APPENDIX D: FOOTNOTES

- (1) Pelvic Inflammatory Disease (PID) does not include chlamydial PID or gonococcal PID, which are shown separately under chlamydia and gonococcal PID respectively. PID cases for which the etiologic agent is determined to be *Chlamydia trachomatis* or *N. gonorrhoeae* are included in the total number of cases of chlamydia and gonorrhea, respectively.
- (2) Diagnosis of cholera is confirmed by isolating *Vibrio cholerae* from feces, and is distinguished from isolation of other *Vibrio* species that also cause gastrointestinal disease and are counted as *Vibrio* Infections in this report.
- (3) Midway through 1992, penicillinase-producing *Neisseria gonorrhoeae* (PPNG) was no longer tested for in the Public Health Department Laboratory and are thus no longer tallied as a separate category.
- (4) Effective June 12, 2007 invasive *Haemophilus influenzae* occurring in patients 15 years of age and older is no longer a reportable condition.
- (5) Effective December 1, 1998, at the request of the California Department of Health Services, individuals with hepatitis C antibody who do not meet the criteria to be reported as hepatitis C acute are to be reported as hepatitis C carrier.
- (6) This category of bacterial meningitis does not include *Neisseria meningitidis*, which is reported separately as meningococcal meningitis or meningococemia.

APPENDIX E: DATA SOURCES

Communicable Disease (CD) Incidence Data (For all CDs except AIDS and HIV)

County of San Bernardino

- County of San Bernardino CD records.

California

- CD Data (2013): *Yearly Summary Reports of Selected General Communicable Diseases in California 2011-2013*. Available at <https://www.cdph.ca.gov/data/statistics/Pages/YearlySummariesofSelectedGeneralCommunicableDiseasesinCalifornia2011-2013.aspx>
- Rabies 2013 Rabies Surveillance in California Annual Report 2013, Veterinary Public Health Section, California Department of Public Health, December 2014. Available at <http://www.cdph.ca.gov/healthinfo/discond/pages/rabies.aspx>
- STD 2014 CDPH STD Branch. Cases and Rates, California Counties and Selected City Health Jurisdictions, 2010- 2014, Provisional Data. Available at <http://www.cdph.ca.gov/data/statistics/Pages/STDDDataTables.aspx>.
- STD 2004-2013 *Sexually Transmitted Diseases in California, 2013*. California Department of Public Health, STD Control Branch, January 2015.
- Tuberculosis (2012) Tuberculosis Control Branch, Report on Tuberculosis in California, 2012. California Department of Public Health, Richmond, CA. July 2013.
- Tuberculosis (2014) Tuberculosis Control Branch, 2014 Provisional California TB Tables. Available at <http://www.cdph.ca.gov/data/statistics/Pages/TuberculosisDiseaseData.aspx>
- West Nile Virus (2013) *2002-2013 WNV Case Summary*. Retrieved from <http://www.westnile.ca.gov/>

United States

- Centers for Disease Control and Prevention. [Summary of Notifiable Diseases, 2012]. Published September 19, 2014 for MMWR 2014;61(No. 53)
- Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2013*. Atlanta: U.S. Department of Health and Human Services; 2014.
- Rabies (2013) Dyer JL, Yager P, Orciari L, et al. Rabies surveillance in the United States during 2013. J Am Vet Med Assoc 2014; 245:1111-1123.
- West Nile Virus (2013, 2014) West Nile virus disease cases and deaths reported to CDC by year and clinical presentation, 1999-2014. Retrieved from <http://www.cdc.gov/westnile/statsmaps/final.html> (Accessed 5/21/15).

AIDS and HIV Data

County of San Bernardino

- CA Office of AIDS, eHARS download, 4/7/2015.

California

- Centers for Disease Control and Prevention. *HIV Surveillance Report, 2013*; vol.25. <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published February 2015. (Accessed 7/2/2015)

United States

- Centers for Disease Control and Prevention. *HIV Surveillance Report, 2013*; vol.25. <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published February 2015. (Accessed 7/2/2015).

Population Data

County of San Bernardino and California

- State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, December 2014.

United States

- US Census Bureau, Population Division. Table 1. Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2014 (NST-EST2014-01). December 2014.

Healthy People 2020 Objectives

- US Department of Health and Human Services. *Healthy People 2020*. Retrieved from <http://healthypeople.gov/2020/default.aspx>, 8/15/13.

General Disease Facts and Data

- Centers for Disease Control and Prevention. *Diseases & Conditions*. Retrieved from <http://www.cdc.gov/DiseasesConditions/>
- Heymann, D. L. (Ed.). (2008). *Control of Communicable Diseases Manual*. (19th ed.). Washington, DC: American Public Health Association.